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MILITARY HISTORY JOURNAL

**Combating Enemy Operational Reserves in
Offensive Operations of Great Patriotic War**
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[Article, published under the heading "Soviet Military Art," by Lt Gen (Ret) A.A. Sokolov, candidate of historical sciences: "Combating Enemy Operational Reserves in Offensive Operations of Great Patriotic War"]

[Text] The experience of the Great Patriotic War shows that achieving the goals of offensive operations depended largely upon the successful countering of enemy operational reserves. The skillfully executed defeat of the later deprived the enemy of the opportunity to parry our blows, to build up effort on threatened axes and organize resistance on intermediate lines. At the same time, the underestimation of the possible actions by enemy reserves and the insufficiently effective combating of them led to setbacks, as was the case in the Soviet troop offensive in the area of Kharkov, Lozovaya in February-March 1943, when they suffered significant losses in personnel and combat equipment and were forced to retreat to the Severskiy Donets.

The Nazi Command established operational reserves in the armies and army groups consisting, respectively, of one or two infantry or panzer divisions and 3-7 infantry and panzer divisions. These were positioned in the operational defensive zone at a depth of up to 80 km and more.(1) The operational reserves were employed, as a rule, in conducting counterattacks and counterstrikes as well as in reinforcing the defenses on threatened axes.

The time and depth of committing the enemy operational reserves to battle varied (see the Table). As can be seen from the table, the encountering of the enemy operational reserves more often occurred on the second-fifth day of the operation at a depth up to 120 km from the former forward defensive edge. There were also exceptions. For example, in the Zhitomir-Berdichev Operation, the Nazi Command committed the strategic reserves (XLVI Panzer Corps) and the reserves of the army group (XIII Army Corps) to battle on the 18th day in the Vinnitsa area at a depth of 140 km from the former forward defensive edge. As a result of the counterstrike launched by them against our formations of the 1st Tank Army (commander, Lt Gen Tank Trps M.Ye. Katukov) and the 38th Army (commander, Col Gen K.S. Moskalenko) of the First Ukrainian Front, our troops retreated some 15-20 km.

From what has been said, it can be concluded that organizing the countering of enemy reserves was one of the important aspects in the activities of the commanders and staffs while determining the method for defeating them was part of the overall concept and plan of the offensive operation. The defeat of the reserves was carried out in close relation to executing the other operational tasks being carried out by the front's troops in the course of conducting the operation. The deep configuration of the troops of the front and armies, the presence of strong second echelons, mobile groups and various types of reserves increased the capability of the troops to build up the effort and maneuver and this was a prerequisite for defeating the enemy reserves. Since in turn the enemy, by committing fresh forces to battle intended to force the course of battle in its favor, the combating of them required the organizing and executing of continuous reconnaissance, the defeating of the enemy reserves when they took up their concentration area, checking the advance to the front line, deploying and launching counterstrikes as well as taking up intermediate lines.

Time and Depth of Committing Enemy Reserves to Battle During the Great Patriotic War

Periods of war	Military campaigns	Times of committing reserves in process of operation, days	Depth of commitment from former enemy forward edge, km
Second	Winter 1943	2-4	10-25
	Summer-autumn 1943	4-9	40-110
Third	Winter 1944	1-3	15-50
	Summer-autumn 1944	5-6	50-120
	Concluding 1945	1-2	5-20

The last war confirmed the necessity of sufficient reconnaissance of the enemy reserves directed at promptly discovering the enemy's intentions and determining the composition of the troops, the axis and time of action. Due to well organized reconnaissance, in a majority of instances, the commands of the fronts and armies succeeded in guessing the enemy's intention to use the reserves and take effective measures to eliminate them.

The destruction of the enemy operational reserves in the concentration area was largely determined by their distance from the front line. Here an active role was played by aviation. Its actions commenced by sealing off the area of the forthcoming operation from the arrival of fresh forces, disrupting the lines of communications and the routes for maneuvering the reserves. Thus, in the Vistula-Oder Operation, in the area of the First Ukrai-

nian Front, our aviation destroyed a majority of the bridges and crossings in the enemy rear and road traffic was paralyzed by strikes against the most important junctions. In it in the zone of the First Belorussian Front, when the Nazi defenses on the eastern bank of the Vistula had been breached and the mobile troops were rushing into the breach, aviation had the task of launching massed strikes against the crossings, railroad junctions and troops in order to prevent an organized retreat of the main enemy forces which had been beaten on the line of the Vistula as well as the approach of its operational reserves. The retreating enemy units suffered enormous losses from the actions of the Soviet aviation and mobile formations and were frequently restricted in maneuvering while the arriving reserves did not succeed in promptly taking up the prepared lines and organize defenses. Regardless of the fact that the Nazi Command, from 15 January through 8 February 1945, moved up 35 divisions, 2 brigades and other units into the zone of the First Belorussian and First Ukrainian Fronts, it did not succeed not only in organizing a defense on intermediate lines, but even pull its forces back to the other side of the Oder from under the strikes of the fronts.(2)

The best for launching attacks against the reserves was a moment when the enemy had taken up the concentration area but had not yet been able to provide shelters for the personnel and combat equipment as well as organize an air defense. Thus, in the Orel Operation in July 1943, well organized reconnaissance discovered the concentration of three enemy divisions some 40 km from the front line. Aviation attacked the reserves and as a result of this the enemy, without having completed its concentration, began to move the divisions up into the area of the 11th Guards Army (commander, Lt Gen I.Kh. Bagramyan). Here these formations were defeated by the front's advancing troops.(3) In the Lwow-Sandomierz Operation, the 2d Air Army (commander, Col Gen Avn S.A. Krasovskiy) made several massed strikes against the enemy reserves, having completed 1,848 aircraft sorties by the second half of 15 July 1944. As a result of this, the Nazi grouping was disorganized and its counterstrike against the flank of the 38th Army was, in essence, aborted.(4)

The countering of enemy reserves moving up to the front line was carried out by various means and methods: by air and artillery strikes; by a rapid offensive by the front's formations, particularly the mobile troops; by establishing barricade lines on the reserves' routes of advance. The fire strikes and the maneuvering of troops comprised a single process. For example, in the aim of checking the approach to the front line by an enemy panzer grouping which had been shifted in the summer of 1943 from the Donbass to the Kharkov area and to delay its commitment to battle, initially massed raids were made by the aviation of the 17th, 2d and 5th Air Armies. As a result of this, the planned moving up of the enemy troops was disrupted. The defeat of the groupings was completed in the course of the meeting engagement of the Voronezh Front at Bogodukhov and Akhtyrka.

Soviet aviation in the same manner checked the Kotelnikovo grouping in the Stalingrad Operation in December 1942 and the 12th Nazi Army in the Berlin Operation of April 1945.

The **mobile troops** played a major role in countering the reserves. Most often they defeated them in moving up to and reaching the deployment line, when the troops of the front fighting on the axis of the counterstrike possessed the required reserves (second echelons) or when the commander of the front had an opportunity to regroup quickly forces from other sectors to the threatened axis or establishing the required superiority. A meeting engagement was the most characteristic form of defeat. Thus, as a result of a meeting encounter in January 1945, the XXIV Panzer Corps in the Kielce area was defeated by the troops of the First Ukrainian Front. Being in the reserve of Army Group A, it had been given the mission on the morning of 13 January, to launch a counterstrike against the flanks of the front's grouping which had broken through, primarily the 4th Tank Army. During the night of 13 January, the enemy began to move up to the deployment line. At the same time, the forward detachments from the corps of the 4th Tank Army (commander, Col Gen D.D. Lelyushenko), hastily crossing the second zone of the enemy defenses, at dawn encountered the forward detachment of the XXIV Panzer Corps. In the meeting engagement which broke out to the south of Kielce and lasted over 2 days, all three divisions of the corps were completely defeated (Diagram 1).(5)

During the war years, also employed as a method for defeating the operational reserves was the **temporary going over a portion of the forces to the defensive** on the axis of the enemy thrust with the subsequent resumption of the offensive here. This was used when the enemy possessed a significant superiority in forces. The troops which had gone over to the offensive were to defeat the counterstrike by firing from a halt, the advancing grouping was to be weakened and ground down as much as possible and then defeated by a decisive thrust. The Nazi troop reserves were defeated in this manner to the south of Stalingrad at the end of 1942 as well as on 18-20 August 1943 in the Akhtyrka area in the final stage of the Belgorod-Kharkov Offensive Operation of the Voronezh Front. In the latter instance they parried a counterthrust by five divisions which on 18 August breached the defenses of the previously weakened 155th and 166 Rifle Divisions of the 27th Army (commander, Lt Gen S.G. Trofimenko) and had pushed in some 24 km. In the middle of the day the grouping which had pushed in was engaged by the forward formations of the 4th Guards Army (commander, Lt Gen G.I. Kulik) which had been moved up from the reserve of Hq SHC [Headquarters Supreme High Command]. By the end of the day the enemy had been halted on a line of Veselyy Gay, Zaporozhets and to the west of Novaya Odessa. On 19 August, the main forces of the 4th Guards Army, in cooperation with formations from the 1st Tank Army and 27th Army, launched an attack against the left flank

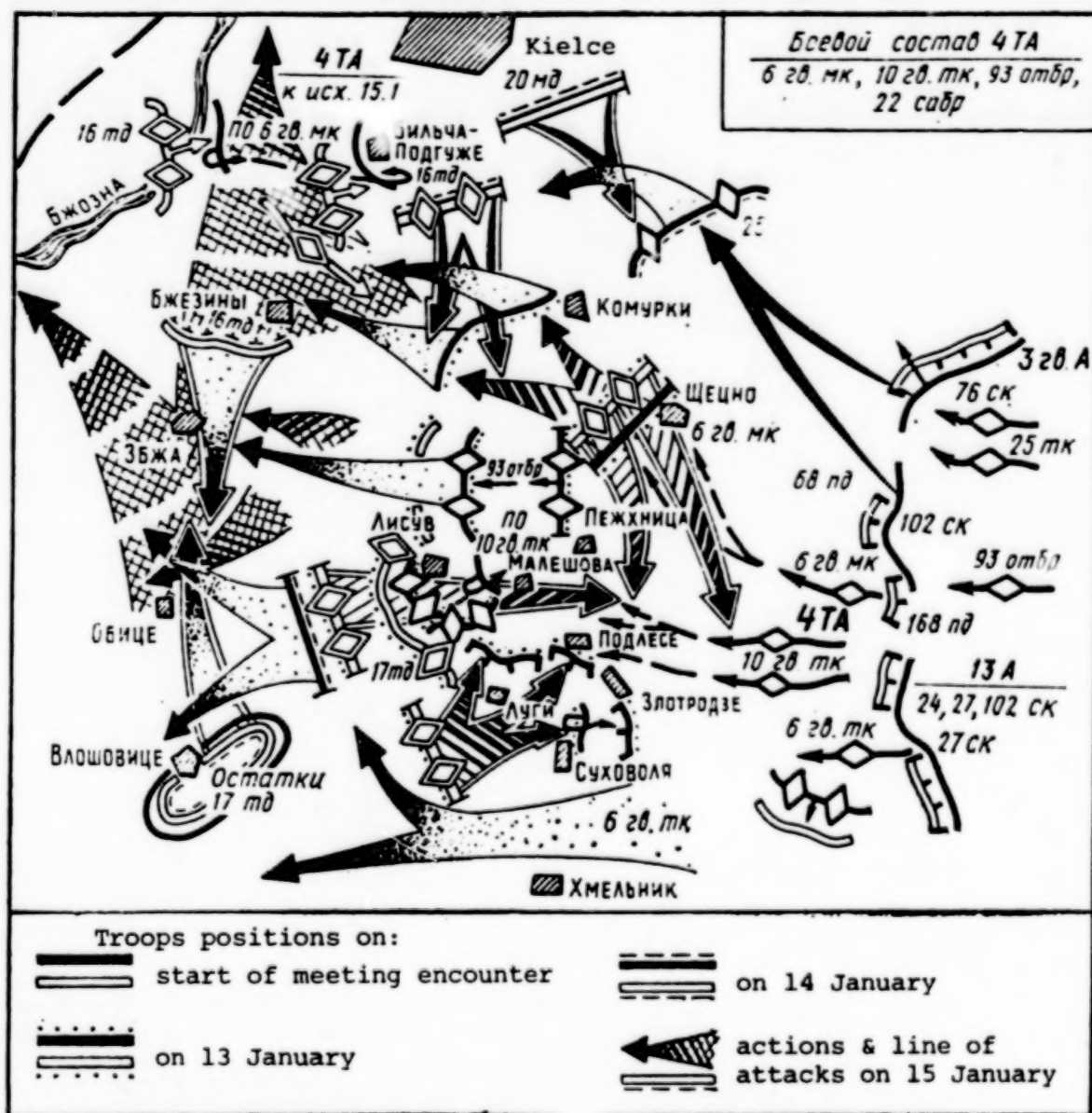
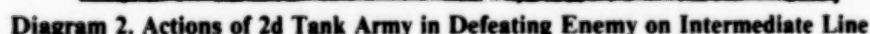


Diagram 1. Defeat of Enemy by 4th Tank Army at Kielce (13-15 January 1945)

of the enemy which had pushed in. In the engagement which developed along a front of over 20 km, the enemy, in suffering heavy casualties and losses in equipment, particularly tanks, broke off active offensive operations and went over to the defensive.(6)

The defeating of counterstrike groupings was of a more intense nature than the combating of enemy reserves being moved up to take up the defensive on intermediate lines. A counterstrike grouping, as the experience of the war was to show, was better organized, aimed at active operations and reinforced in fire terms. It, as a rule, was securely covered from the air, it maneuvered constantly,

shifting efforts from one axis to another, it sought out and frequently found the weakest link in the chain of advancing troops. Only a correct assessment of the situation made it possible to establish whether the advancing grouping intended to launch a counterstrike or would take up an intermediate line as well as where the advancing troops could encounter it. Under present-day conditions, the defeat of enemy reserves which are launching a counterstrike in the course of offensive operations can be achieved by various methods. However, it is essential to endeavor to deal a decisive defeat to the counterstrike grouping before it can start active operations.



Under present-day conditions, a most important task for the advancing troops also remains to deprive the enemy

The forward detachments played a very major role in combating enemy operational reserves which were moving up. In essence, the engagement was initiated by them and only then did the main forces join battle. Strong in size (from a reinforced battalion in a division to a reinforced brigade in a tank and mechanized corps), the

forward detachments possessed sufficient independence in fighting. Under the cover of fire, they moved up to the routes of march of the reserves, they were the first to take the attacks, forcing the enemy troops to deploy and enter battle under unfavorable conditions. The seizing of initiative and ultimately the defeating of the reserves depended upon the decisiveness of the actions by the forward detachments. The success, without fail, had to be promptly followed up by the main forces. Where, for some reason, the latter did not succeed in supporting the forward detachments, the fighting assumed an extended nature and did not undergo the required development. Thus, in the engagement of the 1st Tank Army against the enemy III Panzer Corps on 11 August 1943 near Bogodukhov, the army forward detachments became separated from the main forces by some 20 km, they cut the Kharkov-Poltava railroad, they seized a good line and entered into battle against the superior forces of the approaching SS Totenkopf Division. But, without being supported by the main forces (the enemy had checked them on the Merchik River), they were forced to go over to the defensive and subsequently fight their way back.(8)

Also during the years of the last war, there was experience in employing **airborne forces** in the aim of checking the approach of the enemy reserves, assisting the mobile troops, disrupting the enemy rear as well as for carrying out other tasks. For example, the airborne forces employed in January 1942 at Vyazma during the concluding stage of the Battle of Moscow were to assist in completing the encirclement of the enemy Vyazma grouping, preventing supply and blocking maneuver along the Smolensk-Vyazma railroad and highway. Airborne forces played a positive role in defeating the Nazi troops at Moscow, although the task set for them was not completely carried out. Even then this experience showed that with proper preparations for the airborne operation and its complete support, the effectiveness of employing airborne forces is indisputable. Under present-day conditions, in the course of an offensive operation, airborne forces can be landed at the most different depths. Modern weapons, equipment and maneuverability make it possible for them to land suddenly in the enemy rear and, coming out on the routes of march of the reserves, launch tangible fire strikes against them, fight from ambushes, attack from the flanks and rear, destroy the most important elements of the march configuration, set up various obstacles and so forth.

The combating of enemy operational reserves was one of the conditions for the successful exploitation of offensive operations. This was carried out on a centralized basis in accord with the operation's plan of the front and army commanders and under their immediate supervision. The front commander, having sufficient air forces at their disposal, could effectively fight the enemy reserves. Great attention was given to the cooperation between the forces involved in the fighting, particularly between aviation and the mobile troops. In all the offensive operations, commencing from the second period of the

war, air representatives were located at the army and formation command posts and they were in contact with the airfields and airborne aviation. In the forward detachments frequently there were guidance officers. All of this told on the results of successfully combating the reserves.

In summing up what has been said, it is essential to point out that successful combating of enemy operational reserves was ensured by the following: by the choice of the most effective and most advantageous methods of conducting the operation and defeating the enemy groupings; by well organized and continuously conducted reconnaissance of the enemy reserves; by carrying out measures for operational camouflage, particularly disinformation in the aim of confusing the enemy on the axis of the concentration of our main efforts; by an offensive at a rapid pace and so forth.

In speaking at a military science conference held in the Group of Soviet Forces in Germany in November-December 1945, MSU G.K. Zhukov said: "Speed is the main, decisive means against all enemy measures, including all enemy regroupings both from the interior and from other sectors of the front. Speed is the basic means for quickly defeating the enemy. It is essential to act so quickly that the enemy is always late."

An analysis of the experience of combating enemy operational reserves during the offensive operations of the Great Patriotic War indicates that success was achieved by the coordinated efforts of all the forces involved in carrying out this task and by a combination of different methods of their action. Here the leading role was played by aviation and the mobile troops. The most effective means for defeating the operational reserves were active, chiefly offensive, actions.

Modern means of combat and the existing long-range and highly effective weapons make it possible to provide a new approach to resolving the question of combating operational reserves. It is possible to defeat the enemy groupings not only successively, as the advancing troops arrive as was the case in the past, but simultaneously to the entire depth of their position. At the same time, the possibility of widely employing airborne troops makes it possible to establish a front of combat in the enemy rear in hitting, tying down and paralyzing the enemy's operational reserves. This will create good conditions for successfully concluding their defeat with the approach of the highly mobile formations advancing from the front.

Footnotes

1. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II 1939-1945], Moscow, Voenizdat, Vol 12, 1982, p 322.
2. *Voyenno-istoricheskiy zhurnal*, No 1, 1965, p 75.
3. "Istoriya vtoroy mirovoy...", Vol 7, 1976, p 161.

4. "Sbornik materialov po izucheniyu opyta voyny" [Collection of Materials on Studying the Experience of the War], Moscow, Voenizdat, No 22, 1946, p 46.

5. "Operatsii Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voyne 1941-1945" [Operations of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, Vol 4, 1959, pp 130, 131.

6. "Belgorodsko-Kharkovskaya nastupatel'naya operatsiya Krasnoy Armii" [The Belgorod-Kharkov Offensive Operation of the Red Army], Moscow, Izd. Voennoy akademii im. M.V. Frunze, 1945, pp 30-31, 36-38.

7. A.I. Radziyevskiy, "Tankovyy udar" [Tank Attack], Moscow, Voenizdat, 1977, p 147.

8. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 300, inv. 3070, file 85, sheets 13-14.

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Artillery Support in Committing Front Mobile Groups to Engagement (Breakthrough)

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[Article by Lt Gen (Res) V.I. Piratov, candidate of military sciences and professor; Col R.P. Filippov: "Artillery Support in Committing Front Mobile Groups to the Engagement (Breakthrough)"; the article was written from the experience of the Great Patriotic War]

[Text] The problem of exploiting the success during the offensive operations of the Great Patriotic War was largely solved by employing large formations of armored and mechanized troops as mobile groups of the fronts and armies. In a predominant majority of operations, tank armies comprised the mobile group (the follow-up echelon) of a front.

The commitment of the mobile group to the breach for exploiting the success was one of the crucial moments in organizing and conducting a front-level operation. In a majority of instances, the mobile groups were committed to battle on the first day of the operation in the aim of completing the breaching of the enemy's tactical defensive zone. During the third period of the war, in a number of front offensive operations, the mobile groups of the fronts were committed to the breach also after the combined-arms formations had crossed the Nazi tactical defensive zone, that is, into a so-called "clean breakthrough."

The most important conditions for the successful commitment of the mobile groups to battle was its complete support. This was entrusted to the combined-arms armies in the areas where the mobile groups were to be committed and to the frontal [tactical] aviation.(1)

The formations of a combined-arms army, having captured the start line, covered the flanks of the mobile group against enemy counterstrikes and supported the commitment in artillery and engineer terms. The air formations with the start of the commitment were transferred and put under the operational subordination of the command of the mobile group and by air strikes cleared the way for its tank and mechanized formations.

Artillery support for the commitment of the mobile groups to the breach was basically assigned to the artillery groups of the combined-arms formations and field forces. In a number of instances a portion of artillery from the mobile groups was also involved. The main tasks of the artillery here were to neutralize the enemy antitank artillery and centers of resistance ahead of the front of the mobile groups and on the flanks of the commitment zone, to destroy and neutralize the enemy artillery and mortar batteries in the defensive depth, to repulse enemy counterattacks and support the mobile formations by bracketing the fire of the long-range artillery groups according to previously prepared lines and sections to the range of their guns' fire.(2)

The artillery support plan was worked out by the artillery staffs of the mobile group and combined-arms army(3) where the commitment was to be made, considering: the operational tactical situation in the zone of advance of the front; the intelligence data on enemy defenses; the degree of suppressing and destroying enemy weapons in the course of the artillery softening up and support for the assault in the breaching of the defensive zones; the depth of breaching the tactical defensive zone as well as the depth and time of commitment to the breach.

This document usually indicated the zone and axis of actions by the first echelon formations of the combined-arms army and the start line for the mobile group, the strength and tasks of the artillery groups and other artillery weapons involved in supporting the commitment; the questions were shown of organizing artillery fire control and maintaining continuous interaction between the artillery of the combined-arms army and tank (mechanized) formations and so forth. A diagram of the fire and markers as well as a coded topographic map were appended to the plan for artillery support of the mobile group's commitment to the breach.

In organizing cooperation of the mobile group with the artillery of the combined-arms army specially assigned to support the commitment, a cooperation table was drawn up and this defined the amount of artillery to be assigned for supporting the commitment and the areas of its firing positions, the depth and method of the fire support for the forward brigades in committing the mobile group,

the signals for calling in and ceasing fire, the procedure for artillery support of the mobile group's flanks and its antiaircraft artillery cover, the number of spotter officers to be assigned to the artillery regiments (and to them precisely) for following the forward units of the mobile group with the indicating of their existing communications equipment.(4)

For the prompt readying of the artillery which was to support the commitment of the mobile field forces (formations) to the breach, careful reconnaissance of the targets was important. Here particular attention was given to determining the position of the enemy artillery and mortar batteries. These data were constantly adjusted and analyzed and were used without fail in the final elaboration of the plan for artillery support for the commitment. Thus, for planning fire in the interests of the commitment of the mobile group on the Voronezh Front consisting of the 1st and 5th Guards Tank Armies in the period of preparations for the Belgorod-Kharkov Offensive Operation, the 60th and 51st Separate Correction-Reconnaissance Squadrons conducted aerial photography of the second defensive zone and other important sectors deep in the enemy defenses. The sound ranging batteries of the 12th Guards, 615th and 621st Separate Artillery Reconnaissance Battalions determined the coordinates of the firing positions of 60 percent of the enemy artillery subunits and 20 percent of the mortar out of those reconnoitered in the zones of the 6th and 5th Guards Armies. The data on the enemy were constantly adjusted by the observation posts.(5) For example, in preparing the Kiev Offensive Operation, the forces of the 60th Separate Correction-Reconnaissance Air Squadron and the 111th Separate Reconnaissance Battalion over the period from 27 October through 3 November 1943, in the zone of the 38th Army, where the 3rd Guards Tank Army was to be committed reconnoitered and confirmed 433 targets, including 52 artillery batteries.

For conducting reconnaissance on the flanks of the zone of the commitment to the breach, they used special artillery reconnaissance groups from the mobile group's artillery. From the experience of the 3rd Guards Tank Army they usually included the commander of a headquarters platoon of one of the artillery batteries, two or three scouts and one or two radio operators with radios. In addition to reconnoitering the enemy, they also surveyed areas of the possible deployment of firing positions and the setting up of observation posts.(6)

The organization and implementation of artillery support for the commitment of the mobile groups to the breach in the course of the offensive operations during the war years were constantly improved. Planning was bettered, the amount of artillery to support the commitment and its density were increased, and the depth of fire support rose. Artillery density in the commitment zones, particularly during the third period of the war, averaged 60-70 guns per km. The depth of fire support from the start line averaged 12-16 km.(7)

Before the commitment of the mobile group, there was usually a brief artillery softening up or short intense shelling.

For the first time in the war years artillery support for the commitment to battle of the mobile group from the Southwestern Front consisting of the XXI and XXIII Tank Corps was planned (albeit in a general form) and carried out in the Kharkov Offensive Operation in May 1942. In accord with the plan, the support for the commitment was assigned to the long-range artillery group of the 6th Army in whose zone the mobile group was to be committed and to the artillery from the first echelon rifle divisions. The artillery group consisting of four artillery regiments, two regiments (minus one battalion) and a separate battalion of field rocket artillery was to neutralize the enemy's strongpoints on the flank of the mobile formations while the artillery troops of the first echelon 41st, 411th and 266th Rifle Divisions of the field forces were to destroy the weapons both on the flanks and ahead of the commitment front.

Regardless of the fact that the tank corps were committed not on the third day of the operation, as had been planned, but only on the sixth and from a different line, due to the previously elaborated plan artillery support was not badly carried out. In the morning of 17 May, the formations of the mobile group entered battle and, shattering the enemy's resistance, by the end of the day had advanced 10-15 km.

A shortcoming of the artillery support for the commitment of this front mobile group was that the actions of the supporting artillery and tank formations were not coordinated directly in the field.

During the second and third periods of the war, artillery support for the commitment of the front mobile groups to the breach was planned and carried out in more detail. In our view, the most instructive in this regard was the experience of the Belgorod-Kharkov, Lwow-Sandomierz and Iasi-Kishinev Operations.

Artillery support for the commitment to battle to complete the breaching of the enemy tactical defensive zone for the 1st and 5th Guards Tank Armies, the mobile group of the Voronezh Front, in the **Belgorod-Kharkov** Offensive Operation was carried out in accord with the elaborated plan. In truth, according to it, for supporting the commitment they were to employ only the artillery of the combined-arms armies and the artillery attached to the mobile formations. However, the TOE artillery of these formations was also employed in the commitment. In supporting the actions of the tank armies in committing them to battle, they also called in the army artillery group of the 5th Guards Army consisting of the 13th Artillery Breakthrough Division, the army artillery of the 6th Guards Army consisting of the 123rd Heavy Artillery Brigade and the 628th Cannon Artillery Regiment, all the artillery of five rifle divisions and the corps long-range artillery groups.(8) In the artillery support for

the commitment of this mobile group, they used the following reinforcement artillery: in the 1st Tank Army, an antitank brigade and a separate guards mortar [rocket launcher] regiment; in the 5th Guards Tank Army, two antitank regiments, a regiment of rocket artillery and two self-propelled artillery regiments. In committing the tank field forces to the engagement, artillery softening up was not planned and not carried out, as significant damage had been caused to the first zone of enemy defenses during the period of the heavy artillery and air softening up. In depth ahead of the front of movement of their first echelon corps, the artillery according to the plan carried out long-range fire attacks (DON) and conducted concentrated fire while on the flanks there was fixed barrage fire. The TOE and attached artillery of the tank and mechanized corps fired directly ahead of their advancing units, destroying enemy weapons which obstructed the advance. Cooperation of the supporting artillery with the mobile formations was provided with the aid of artillery correctors who were in radio-equipped tanks. The procedure of their work in committing the tank field forces to the breach was set out by the Instructions to the Battery Commander.(9) The radio-equipped tanks moved in the battle formations of the brigades along with the combat vehicles of the commanders of these formations. Due to the fact that the main forces of the tank armies were committed to the engagement at different times, the enemy installations and targets in the second defensive zone were hit by unplanned artillery fire as called in.

In repelling the counterattacks in committing the tank armies, according to the number of first echelon brigades, from the reinforcement artillery they established antitank artillery groups which included one or two antitank brigades, separate self-propelled artillery mounts [SAU] and a company of 82-mm mortars. The antitank artillery groups, with the commitment of the tank armies to the breach, switched to direct support for the tanks and infantry. They moved in the tank columns of the brigade being support and when necessary with their fire, neutralized enemy firing points and personnel. In repelling enemy counterattacks, the artillery troops of the groups destroyed the tanks and assault guns by direct laying.

In the **Lwow-Sandomierz** Offensive Operation, they planned to employ artillery not only to support the commitment of the 1st and 3rd Guards and 4th Tank Armies to battle but also for fire support for them until they came out in the operational depth.

The plan of artillery support for the commitment of each tank army to the breach was worked out jointly by the artillery staffs of the combined-arms army where the commitment was to be made and by the artillery staff of the tank field force. This document was approved by the military councils of both armies. It set the start lines, the zones and axes of operations for the first echelon corps of the tank army, the strength and tasks of the artillery groups supporting the offensive, it took up the questions

of organizing fire control and maintaining continuous cooperation between the artillery and tanks (mechanized) corps and gave the number (with a note as to whom they were being sent) of artillery correction officers. Appended to the plan were diagrams of the general markers and fire as well coded maps.(10)

For supporting the commitment of the tank armies to the breach, from the artillery of the combined-arms armies they established special artillery groups (consisting of two or three artillery brigades) according to the number of first echelon tank (mechanized) corps from each tank army. Their task was fire support for the mobile formations being committed to battle to the depth of maximum firing range of the guns from the same firing positions. Moreover, each tank army was reinforced with one antitank brigade and one or two battalions of 122-mm cannons or 152-mm howitzer cannons on mechanized traction.

The fire of the artillery supporting the commitment was planned from the infantry pass lines (20-25 km from the forward edge of the defenses). The dimensions of the fire support zones for the tank (mechanized) corps varied within limits of 14-20 km along the front and 10-15 km in depth. In the support zones there were 4-5 lines on which several areas of massed fire were designated. The latter brought together from three to five divisional areas. For each area, one and more rarely two or three artillery brigades prepared data. Target designation and the calling in of fire were planned by radio sending in the clear. When necessary, the procedure of fire and shell consumption were also given. The brigade and higher commanders were given the right to call in fire in addition to the fire correctors.

The neutralizing of the strongpoints and centers of resistance with artillery support for the commitment of tank armies to the breach was planned using the method of massed fire combined with the fire of the tank army artillery a portion of which was assigned for direct laying.

The commitment of the main forces (VI Guards, VII Guards Tank Corps and IX Mechanized Corps) of the 3rd Guards Tank Army to the engagement in the zone of the 60th Army on the Lwow axis was preceded by the fighting of its forward detachments and the troops of the XV Rifle Corps of the 60th Army fighting with them to complete the breaching of the tactical defensive zone. In the morning of 16 July 1944, the army was committed to the breach through the so-called Kotlov Corridor. By the start of the commitment, the 10th Guards Antitank Brigade and two battalions of cannon artillery were switched to it.

Fire support for the commitment was provided by the artillery of the 60th Army together with the aviation. Unfortunately, the command was able to involve only very limited artillery (eight battalions) in carrying out this task, as the basic mass of army artillery by the

morning of 16 July was located some 15 km and more from the objectives. For this reason, the tank army formations were committed to the breach with insufficient fire damage to the enemy ahead of their front and, in essence, themselves broke the trail to the west. The situation was better on the flanks of the tank field force. For supporting them, the artillery of the first echelon rifle divisions of the XV Rifle Corps were employed. A significant portion of the antitank artillery from these formations was involved in repulsing enemy tank counterattacks while the divisional artillery groups combatted the enemy artillery.

On 17 July 1944, following the 3rd Guards Tank Army on the Lwow sector through the Kotlov Corridor they began committing the X Tank Corps of the 4th Tank Army. The artillery support for the commitment of this formation consisted of suppressing the enemy artillery in the Plugov and Zolochiv areas and repelling the strong enemy tank and infantry counterattacks on both flanks of the corps.(11) The VI Mechanized Corps which was following the X Tank Corps basically succeeded in passing the narrowest sector before the start of the heavy fire, however a significant portion of the TOE and attached artillery fell behind. In having a limited amount of artillery, the formation was forced to fight for 2 days against the counterattacking enemy.

On the Rava-Ruska axis the commitment of the 1st Guards Tank Army to battle was planned from the infantry pass line which was 20-25 km from the forward edge. However, the successful actions of the XXIV and XXVII Rifle Corps of the 13th Army in breaching the enemy tactical defensive zone made it possible to carry this out at 1000 hours on 17 July, from a new line closer to the forward edge. Because of this, adjustments had to be made in the previously worked out plan of artillery support. In particular, there were plans to conduct massed fire, particularly on the left route (Byszow, Krystynopol).

The commitment of the 1st Guards Tank Army to the breach was supported by the artillery of the XXIV Rifle Corps and the army artillery group of the 13th Army. The artillery supporting the commitment of the tank army formations to the breach opened fire when called in by the artillery correctors or upon the command of the artillery brigade (group) commander. Target designation and the calling in of fire were carried out by radio sending in the clear.(12)

The artillery support for the commitment of the mobile groups of the Second and Third Ukrainian Fronts to battle in the Iasi-Kishinev Operation can be judged from the commitment of the 6th Tank Army and the IV Guards Mechanized Corps.

The 6th Tank Army was committed to battle in the zone of the 27th Army of the Second Ukrainian Front on 20 August 1944 after the breaching of the enemy defenses

from a line located 7 km from the forward edge. According to the plan, artillery support for the commitment was to be provided by four cannon artillery brigades from the 27th Army and by the artillery of the rifle divisions where the tank army formations were being committed. Moreover, in the committing of the tank army to the breach, there were plans to shift to it the 24th Antitank Artillery Brigade of the RVGK [Reserve of the Supreme High Command] from the 27th Army.(13)

For maintaining close cooperation, the artillery staffs of the rifle and tank (mechanized) formations exchanged representatives. For the same purpose the artillery staffs of the 27th and 6th Tank Armies worked out a cooperation diagram map. On it they designated: the lines where the infantry would be passed by the tanks, the lines and signals for the combat vehicles to reach these, and the sectors of artillery fire supporting the arrival of the tanks on each line.

Artillery support for the commitment was carried out to a depth of 16 km from the start line by the PSO [successive concentration of fire] method against targets ahead of the front and on the flanks of the mobile formations.

Fire control of the artillery supporting the commitment of the tank army to the breach was provided from the observation posts of the artillery chiefs of the rifle regiments and the artillery commanders of the rifle divisions, the commanders of the army artillery groups and the commanders of the cannon artillery brigades. When the tanks and motorized infantry began moving deep into the enemy defenses, artillery fire was controlled by artillery officers sent to the position of the artillery commanders of the tank army corps and stationed in radio-equipped tanks. Their task was to continuously conduct observation of the enemy, detect targets obstructing the advance of the tanks, determine their coordinates and transmit these by radio to the artillery commanders supporting the commitment of the tank army formations to the breach.

Thus, the successful committing of the 6th Tank Army to the breach was a consequence of well organized and excellently executed artillery support for it. The situation with air support was in no way the same. The attack air division which had supported the 27th Army up to this did not have a previously elaborated plan for cooperating with the formations of the 6th Tank Army and could not provide its troops effective aid in being committed to the breach.(14)

For artillery support of the commitment of the IV Guards Mechanized Corps of the Third Ukrainian Front to the breach, from the artillery of the 46th Army they assigned three cannon artillery brigades which were part of the 7th Artillery Breakthrough Division. Moreover, in supporting the corps formations in the commitment they planned to involve the regimental artillery and mortars from the first echelon rifle regiments and the artillery

group of those rifle divisions where they were to be committed. The artillery support for the commitment was to be carried out to a depth of 12 km (from the start line) by the PSO method against two lines upon call-in by artillery observers from radio-equipped tanks. In the aim of neutralizing the enemy weapons, three battalions of the cannon artillery brigades were to be moved up for direct laying. The remaining artillery by the moment of the commitment was to take up positions closest to the start line.

In organizing cooperation of the supporting artillery with the mechanized corps, the artillery staffs of the 46th Army and the IV Guards Mechanized Corps worked out a detailed cooperation diagram map on which they depicted the tasks of the tanks and artillery as well as the questions of artillery fire control.

At 0900 hours on 21 August 1944, after the breaching of the enemy's defenses, the corps entered the breach along three routes. The commitment was preceded by brief intense shelling from the supporting artillery against the enemy strongpoints and batteries. Fire support for its formations was provided by the cannon artillery brigades of the 7th Artillery Breakthrough Division. Fire was called in by spotters from radio-equipped tanks.

It should be pointed out that the support of the corps by artillery fire was not carried as planned since the enemy soon sharply weakened its resistance in the commitment zone.(15)

Thus, the experience of artillery support for the commitment of front mobile groups to the breach showed that an important component part in organizing this is careful, complete planning of actions for the supporting artillery of the combined-arms armies where the commitment is to be made. At the same time, combat practice confirmed that the carrying out of the set plan for artillery support depended largely upon the amount of artillery weapons assigned for this, upon the organizing of close artillery cooperation with the formations of the tank army to be committed to battle (a tank or mechanized corps), as well as upon flexible control over the artillery of the combined-arms army and the mobile group.

The skillful use of frontline experience can help to improve the quality of the operational and combat training of officer personnel in the Armed Forces under present-day conditions.

Footnotes

1. "Istoriya voyennogo iskusstva" [History of Military Art], Moscow, Voenizdat, 1984, p 390.
2. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 232, inv. 598, file 7, sheet 17.
3. Ibid., folio 203, inv. 51354, file 10, sheet 10.

4. A.I. Radziyevskiy, "Tankovyy udar" [Tank Attack], Moscow, Voenizdat, 1977, p 86.

5. TsAMO, folio 236, inv. 42994, file 1, sheets 1-36.

6. Ibid., folio 315, inv. 4455, file 118, sheet 181; file 121, sheet 47.

7. A.I. Radziyevskiy, Op. cit., p 126.

8. TsAMO, folio 332, inv. 4978, file 2, sheet 56.

9. Ibid., folio 300, inv. 313193, file 1, sheet 50.

10. "Artilleriya v nastupatelnykh operatsiyakh Velikoy Otechestvennoy voyny" [Artillery in the Offensive Operations of the Great Patriotic War], Moscow, Voenizdat, Book II, 1965, p 457.

11. "Sovetskaya artilleriya v Velikoy Otechestvennoy voynе 1941-1945" [Soviet Artillery in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, 1960, p 482.

12. G.Ye. Peredelskiy, A.I. Tokmakov, G.T. Khoroshilov, "Artilleriya v boyu i operatsii" [Artillery in Battle and an Operation], Moscow, Voenizdat, 1980, p 66.

13. "Operatsii Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voynе 1941-1945" [Operations of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, Vol III, 1958, p 453.

14. Ibid., Vol III, pp 473-474.

15. "Sovetskaya artilleriya v Velikoy...", p 505.

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Fortified Areas in Civil War

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[Article by Lt Col (Ret) V.V. Kulikovskiy, RSFSR honored cultural worker: "Fortified Areas in the Civil War"]

[Text] For a long time, great importance in wars has been given to fortifying the field (fortification). This has been done differently. During World War I (1914-1918), they began using a new form of fortification, the fortified area (FA) representing sectors or zones of terrain which have been engineer organized and readied for protracted and stubborn defense by specially assigned troop formations independently or in cooperation with the field troops.

At the start of the Civil War, the Red Army basically established zones, areas and defensive centers which were poorly organized in engineer terms. They were

defended by field troops. In the second half of 1918, the Red Army High Command in a report to V.I. Lenin established the necessity of organizing fortified areas (FA) on certain operational sectors (fronts)(1) and from the spring of 1919, began their planned organization. As a total during the war, some 45 fortified areas were established and these, as a rule, were named after the cities in which their main bases were located. These included: Petrograd, Velikiye Luki, Gomel, Dvinsk (Western Front); Vyatka, Simbirsk, Samara, Kazan, Orenburg, Uralsk (Eastern Front); the Kursk, Voronezh, Tambov, Tula, Kozlovsk, Kamyshin, Yelets (Southern Front) and others.(2)

The fortified areas were organized by a decision of the Revolutionary Military Council of the Republic (RVSR) and more rarely by the RVS [revolutionary military council] of the fronts and armies. The most important of these in operational-strategic terms were established by a decree of the Worker and Peasant Defense Council headed by V.I. Lenin. Vladimir Ilich was constantly concerned for recruiting leading personnel for the fortified areas, with the manning of them, the supply of weapons, military equipment, and supervised their combat activities. At council sessions prominent party and state figures gave information on the questions concerning the fortified areas. In particular, at one of these held on 15 August 1919, F.E. Dzerzhinskiy made a proposal to turn over 50 percent of the special auxiliary troop formations to the FAs.(3)

Up to mid 1919, the fortified areas were directly under the Red Army Inspector of Engineers and the chiefs of the engineers of the fronts and armies. The FA departments organized in the same year under the RVSR Field Staff and the front and army staffs played a substantial role in improving leadership of their combat activities.(4) The staff of the Eastern Front and then the other fronts worked out proposals on the administration of the FA in peacetime, wartime and in a state of siege.(5)

The fortified areas were prepared and occupied by special formations. They were entrusted with various tasks, the main ones being: covering the approaches to the nation's political and industrial centers; holding important lines and cities until the arrival of the field troops; supporting the flanks and rear of the armies (fronts); preparing forming-up lines (areas) for an offensive, including for the field troops. For example, the instructions of the Eastern Front RVS of 17 May 1919 stated that "the overall aim of the Eastern Front's fortified areas is the establishing of a strong defensive line along the line of Vyatka, Kazan, Simbirsk, Samara, Saratov." Along with this, the personnel of the fortified areas was given the task of working among the local population to explain Soviet policy as well as the nature and goals of the Civil War.(6)

The organization and establishment of the fortified areas were determined by the RVSR Order No 220 of 13 November 1918 and in accord with this these were

usually to be based upon one or two rifle brigades and more rarely a division or regiment. With forces available, the FAs in addition were to include: up to a battalion of heavy artillery, from 6 to 20 light artillery batteries, armored units and subunits (armored trains, armored vehicles and armored maintenance vehicles), from a cavalry squadron to a regiment, one or two air wings, antiaircraft weapons, searchlights, barrage balloons, river combat vessels and so forth.(7) The fortified areas, as a rule, were divided into sectors and then sections. Each sector covered an important axis. Certain FAs were immediately split up into sections. Strongpoints and centers of resistance were established within the sectors and sections.

The fortified areas were headed by military councils consisting of three men, one of whom, the commandant, was appointed by the Red Army Command. The two others were selected by the local authorities and then approved by the RVS of the Republic or fronts. In individual, most important FAs, for example, in the Petrograd, military councils were also found in the sectors. Red Army commanders were usually appointed the commandants of the fortified areas(8)

The FAs were manned by mobilizing the population of the frontline zone as well as from local patrol teams, detachments of Vsevobuch [Universal Military Training], VChK [All-Russian Extraordinary Commission] teams as well as reserve units of the military districts. Under the conditions of the shortage of time, their core was usually organized around units and formations of field troops. For example, in the summer of 1918, the Samara FA included the 210th Rifle Regiment imeni V.I. Lenin. It supported the defenses on a crucial sector. The battle order stated: "A steadfast unit, the 210th Regiment imeni V.I. Lenin, is to defend the sector of Kamennyy Brod, Dergachi, Berezhovyy Gay, Sukhaya Vayzovka."(9)

Having received the task of preparing the defenses, the military council of a fortified area, with active involvement of representatives from the front's (army's) engineer troops, conducted reconnaissance of the field, took a decision, worked out a plan and began to carry out engineer work.

The plan usually set out: the grouping of forces (including the boundaries of the defensive sectors and sections, the areas for establishing strongpoints and centers of resistance), the tasks for the troops, the nature of the engineer organization of the field, the procedure and sequence of engineer work, the organizing of reconnaissance, cooperation, air defense and so forth.

The troop grouping of a fortified area was established proceeding from the received task, the available forces, the possible variations of enemy actions and the terrain conditions. The defensive sector was usually occupied by a brigade (regiment), a section by a regiment (battalion) and a strongpoint by a battalion (company or platoon).

The battle order, as a rule, was formed up in a single echelon with the assigning of reserves (from one-fifth to one-third of the available forces) and reinforced by cavalry and armored subunits. In individual instances reserves were not established in the regiments and companies. For example, in the Voronezh FA these were found only in the brigades and battalions.(10)

The maximum possible densities of forces were established on the decisive axes. However, in a majority of instances these were only 80-110 bayonets and sabers and 0.8 of a gun per kilometer of front. On the secondary axes the densities were 1.5-2 fold less, particularly in terms of artillery.

The nature of the engineer organization of the terrain, the procedure and sequence of engineer work were regulated by the Directive of the Commander-in-Chief of the Republic Armed Forces of 12 July 1919 as well as by the instructions of the front commanders. At the same time, consideration was given to the situational conditions. In some instances, for example, a system of semicircular defensive structures enclosed the defended object and in others surrounded them completely (Eastern Front). Here ordinarily three positions were built: the forward, main and running along the outskirts of towns and population points the defense of which was part of the task of the FA. On the most important axes, strongpoints were established with all-round defenses and centers of resistance and within these permanent stone-earthen and log-earthen defensive structures were built, wire and other obstacles were set up. In the spaces between the strongpoints, field-type structures were erected. Additional defensive positions and lines of trenches were prepared in the sectors and sections. Towns and large population points were adapted for street fighting.(11)

The leadership over the construction of the fortified areas and responsibility for the safekeeping of defensive structures were entrusted to the front and army chiefs of engineers. Engineer work was carried out by the forces of the FA troops and by the local population. Military field construction organizations erected the permanent defensive structures around the most important installations. For example, the Military Field Construction Organization of the Simbirsk FA established a strong defensive zone around the town and this played an important role in defending the approaches to it as well as in defending the railroad bridge over the Volga, the cartridge plant and other facilities.(12) The military field construction organizations Nos 1 and 6 headed by the engineer D.M. Karbyshev also did very effective work.(13)

In planning the defenses, great attention was paid to reconnaissance and this was conducted by different methods, including with the aid of the local population. Each company was to organize reconnaissance directly ahead of its battle position and on the flanks. Reconnaissance parties reinforced with cavalry subunits were sent out longer distances (up to 25-30 km).

Antiaircraft guns, searchlights as well as aircraft were employed for air defense, usually of large cities. For example, in mid 1919, a fighter from the Dvinsk FA engaged three enemy airplanes. He forced two of them to turn back while one landed in the position of our fortified area.(14)

The combat activities of the fortified areas to a greater or lesser degree reflected the questions of organizing antitank defenses. For combating enemy tanks on the Southern and Western Fronts, for example, duty guns were assigned. At times, the probable tank approaches to our positions were mined. The White Guard Command, having learned of the preparation of antitank measures by the Soviet troops and particularly the mining of the terrain, often refused further utilization of tanks in the fighting on these axes.(15)

The defensive plans of the FA envisaged measures to organize cooperation between the rifle and artillery units, the air and armored subunits. Nevertheless, these were not fully carried out. For example, the methods of employing the services and combat arms were poorly worked out in the course of repelling an enemy offensive depending upon the various possible versions of enemy actions.

An analysis of the documents shows that not all the fortified areas had to fight. Those FA which participated in fighting can conditionally be divided into two groups. The first was made up of the fortified areas combating the interventionists and White Guards solely on the approaches to their main defensive lines (for example, Samara and Gomei);(16) and the other was those defending every inch of the occupied positions (for example, Petrograd and Kursk).

With the announcing of the state of seige, the FA rifle subunits and units took up the combat sections assigned to them. A portion of the defensive positions was often left for the field troops.

The fighting against the advancing enemy on the distant approaches to the FA was initiated by the reconnaissance parties which at times were able to temporarily hold up the advance of the enemy forces.(17) Then the artillery opened fire. Particular attention was given to hitting the main enemy groupings advancing along roads, on approaches and directly ahead of the forward defensive edge. The main efforts were concentrated on holding the defensive positions. Thus, stubborn fighting went on on the Kursk axes for more than 2 months, from the middle of the summer until the start of the autumn of 1919. This was particularly fierce in the defense of Kursk with the city being held by units of the FA under the command of M.S. Svechnikov together with the field troops. For an entire day, two regiments from the southern sector of this FA drove off continuous attacks by eight White Guard officer regiments from the I Army Corps. Only the arrival of enemy armored vehicles on the flanks of the defenders forced them to retreat behind the Seym

River, where new fighting resumed with the previous intensity. (18) The men of the Voronezh and many other FAs courageously fought the White Guards.

The fortified areas played a major role in the fighting for Petrograd, Orenburg and Uralsk. Along with active fighting they constituted regular troop units and subunits for the operational army and sent draft of reinforcements to the front. In addition, many fortified areas, particularly the Petrograd, supported the going over of the field troops to the offensive. For example, when in mid October 1919, a portion of the positions on the Gatchina defensive sector ended up in the hands of Yudenich, the 7th Army (commander S.D. Kharlamov), supported by the Petrograd workers, halted the further enemy advance and then, relying on the Petrograd FA and its fortifications, went over to the offensive, defeated the White Guards and pushed them into Estonian territory. (19)

The FA troops had to fight the armed forces of the domestic and foreign counterrevolution under various conditions. They successfully fought in any season, during the day and at night, they stubbornly defended the occupied positions, they fought in an encirclement, they launched counterattacks and counterstrikes and together with the field troops went over to the offensive. There were also serious shortcomings in the fighting by certain fortified areas, particularly on the Southern Front (Tambov and other FAs). (20) The main reason for this was that both the personnel and the engineer structures could not be readied sufficiently in the short period of time for repelling the superior enemy forces. However, as a whole, during the years of the Civil War, the fortified areas made a worth contribution to the victory of the Red Army. With assaults on the FAs, the enemy suffered significantly higher losses in comparison with fighting under ordinary conditions. For this reason, the White Guards, as a rule, did not undertake frontal attacks on the positions of the fortified areas but tried to outflank them.

The best results in the fighting of the FA formations, units and subunits were achieved with well-organized cooperation with the field troops. In the aim of maintaining close cooperation, liaison officers were sent to the army and front staffs. In turn, the very existence of the fortified areas strengthened the morale of the field troop personnel. As a whole, the methods of the combat employment of the fortified areas and the tasks carried out by them in armed combat against the interventionists and White Guards were significantly broader and more diverse than in World War I.

The local party and soviet bodies carried out great work aimed at increasing the battleworthiness of the fortified area troops. Under their leadership, many FAs were turned into unassailable fortresses on which the crack interventionist and White Guard troops foundered.

The experience of the combat employment of the fortified areas in the Civil War served as a basis for improving their organization and methods of combat. This played an important role during the years of the Great Patriotic War in increasing the strength of defenses on a number of sectors of the front. It has not lost its importance today.

Footnotes

1. "Direktivy Glavnogo komandovaniya Krasnoy Armii (1917-1920). Sbornik dokumentov" [Directives of the Red Army High Command (1917-1920). Collection of Documents], Moscow, Voenizdat, 1969, pp 122-124.
2. "Grazhdanskaya voyna i voyennaya interventsia v SSSR: Entsiklopediya" [The Civil War and the Military Intervention in the USSR: an Encyclopedia], Moscow, Sovetskaya Entsiklopediya, 1983, p 612.
3. Tsentralnyy partiyny arkhiv [Central Party Archives], folio 19, inv. 3, file 65.
4. TsGASA [Central State Archives of the Soviet Army], folio 6, inv. 4, file 108(1), sheet 80.
5. Ibid., folio 679, inv. 1, file 47, sheet 44; folio 6, inv. 6, file 155(1), sheet 7; folio 758, inv. 1, file 96, sheet 68.
6. Ibid., folio 802, inv. 1, file 15, sheet 21.
7. Ibid., folio 780, inv. 1, file 69, sheet 5.
8. Ibid., folio 245, inv. 1, file 24, sheets 18, 182; folio 709, inv. 1, file 3, sheets 1, 67; folio 780, inv. 1, file 3, sheet 176.
9. Ibid., folio 780, inv. 1, file 69, sheet 5.
10. Ibid., folio 707, inv. 1, file 11, sheet 51.
11. Ibid., folio 780, inv. 1, file 65, sheets 5, 22, 28.
12. Ibid., folio 185, inv. 3, file 34, sheet 38.
13. Ibid., folio 802, inv. 1, file 9, sheet 32.
14. Ibid., folio 712, inv. 1, file 32, sheet 86.
15. Ibid., folio 758, inv. 1, file 96, sheet 33.
16. Ibid., folio 802, inv. 1, file 12, sheet 5; folio 712, inv. 1, file 27, sheets 23, 103-105.
17. Ibid., folio 758, inv. 1, file 91, sheet 3.
18. Ibid., file 89, sheet 24.
19. "Grazhdanskaya voyna i voyennaya...", p 631.
20. TsGASA, folio 679, inv. 1, file 42, sheets 40-43.

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**Certain Problems of Preparations of Nation,
Armed Forces to Repel Nazi Aggression**
*00010035d Moscow VOYENNO-ISTORICHESKIY
ZHURNAL in Russian No 4, Apr 88 pp 42-50*

[Article, published under the heading "Debates and Discussions," by Col Yu.G. Perechnev, doctor of historical sciences: "On Certain Problems in the Preparations of the Nation and Armed Forces to Repel Nazi Aggression"]

[Text] [Editorial Introduction] The journal's editors have received many letters in which the readers ask for a more complete and more profound treatment of events in the initial period of the Great Patriotic War as well as voice their own ideas its content, the reasons for the setbacks, the importance of the experience of the first operations of our troops, the sources of mass heroism among the Soviet military as well as on other questions.

In December of last year, the Military History Institute of the USSR Ministry of Defense held a "roundtable" where military historians discussed many questions relating to the initial period of the war. However, according to the unanimous opinion of the "roundtable" participants, this problem requires further study and analysis with the involvement of a broader range of researchers.

In order to continue this important discussion, as well as to meet the requests of our readers, the editors are beginning a series of articles on the prewar and initial periods of the Great Patriotic War with the article by Doctor of Historical Sciences, Col Yu.G. Perechnev and are requesting that the veterans, scientists and military historians as well as all our readers take part in the commenced discussion. [End of Editorial Introduction]

Recently a number of articles has appeared in our press where the authors have endeavored in a new and more complete manner to treat the events of the difficult year for our nation of 1941 and which has remained a sort of "blank spot" in the history of the last war. Particular attention here has been given to the initial period of the war. This is no accident as its results were felt in a negative manner on the entire course of the subsequent military operations during the summer-autumn campaign and brought our people innumerable sufferings and hardships.

The initial period of the Great Patriotic War which lasted until mid July 1941 has kept much that is unclear, unstudied and disputable. All the truth has not yet been

told about the events of those times. The efforts of many researchers will be needed to come as close as possible to it, to analyze this properly and draw lessons for the future.

An analysis of the international and domestic situation of the USSR on the eve and at the outset of the war, an assessment of the state and degree of readiness of the nation and the Armed Forces to repel aggression and a study of the nature and results of the fighting show that the reasons for the failures of the Soviet Army are extremely complicated and diverse. They, it seems to us, rest on a number of political, economic and economic factors of an international and domestic nature and contain elements of an objective and subjective order. From this it follows that the events of those difficult days must be viewed not in isolation but all together, strictly considering both the negative and positive aspects. Particularly dangerous here are emotions and attempts to subjectively assess the activities of the individual political and military leaders.

All these problems require a profound study and thorough analysis. We would like to take up one of these, in our view, the most important, the **problem of the immediate preparation of the nation and the Armed Forces to repel aggression.**

Under the conditions of the growing military threat the Communist Party and the Soviet government were confronted with difficult tasks. The prime ones of these were: the reforming of the economy to ensure expanded production of weapons and equipment; the organizing of the theater of military operations, a significant portion of which had just been incorporated in the USSR; clarifying the plans for strategic deployment due to the change in the Western state frontier and the composition of the coalition of probable enemies; the reorganization and rearming of the army considering the combat experience of the commenced World War II; preparing and carrying out covert mobilization and strategic deployment of the Armed Forces. Significant measures were carried out to increase the size of the Army and Navy, to improve their organization and establishment and combat training. However, by 22 June, many of these tasks had not yet been carried out.

The Armed Forces had increased noticeably in size (from 1.9 million men in 1939 to 5.4 million by 22 June 1941). However, the rapid growth of the new formations occurred without considering the actual capabilities of supplying them with weapons, communications and motor transport. This led to the appearance of under-strength formations and units in the Soviet Army and these were manned with personnel but did have the regulation weapons. A study of the archival documents has shown that in the prewar years sufficient attention was not paid to the development of the special troops such as engineer, signals, motor vehicle and so forth or to supplying them with new equipment. In many regards they lagged behind the requirements of a war. Due to the

shortage of new equipment for the antiaircraft artillery, searchlights and radio technical equipment, the development of the National Air Defense Troops was delayed. The battleworthiness of the mechanized corps in the Western military districts was low due to their insufficient supply, the unpreparedness of the personnel, the shortage of new military equipment, motor transport and other auxiliary vehicles as well as ammunition.

The problem was that after the mistaken deconstituting of the mechanized corps at the end of 1939, they had to be hurriedly reconstituted, starting from July 1940. However, the dates for organizing such corps did not correspond to the real capabilities for their prompt supplying with equipment and trained command personnel.

Thus, on the eve of the war a majority of the mechanized corps had 53 percent of the prescribed tanks and here the proportional amount of new tanks was 18.2 percent.(1) Obsolete design vehicles were greatly worn out and had a motor life of 40-150 motor hours and this did not provide for more extended combat. Around 28 percent needed a major overhaul and 44 percent required a medium overhaul. The corps did not have sufficient spare parts or repair facilities for overhauling the nonoperating vehicles. By 1 July 1941, they planned to satisfy only 11 percent of the need for this. There was an acute shortage of ammunition, particularly for the new tanks. The supply of 76-mm shells for tank cannons did not exceed 12 percent, as their mass output had not been organized. The ammunition shortage for the KV and T-34 tanks sharply reduced the combat capabilities of the mechanized corps. In our view, in the tense prewar situation it would have been better to complete the equipping of several mechanized corps and keep the already sufficiently coordinated and battleworthy tank brigades designed to reinforce in infantry.

The overall state of the Soviet Air Forces on the eve of the war was determined by the incompleteness of the work relating to their deployment and organizational improvement. The constituting of many formations had not yet been completed and the process had virtually just begun of providing aviation with new military equipment. The airfield network, particularly in the border areas, was little developed. In the spring of 1941, in the Western districts they began to concrete the runways at many of the operational airfields. The aircraft had to move to other airfields where there was more than the acceptable number of fighting aircraft. This led to heavy losses in the first enemy air strikes. Although combat experience and theoretical research pointed to the great possibility of the massed employment of aviation, its reorganization into large operational-strategic field forces was not carried out. The air corps existed only in long-range bomber aviation. The remaining Air Forces consisted of divisions and separate brigades under the districts and armies.

The Navy was in a state of reorganization. The submarine forces were developing rapidly. Large surface ships were under construction. But there was not enough of them, particularly minesweepers, patrol boats and destroyers. The fleets lacked assault vessels and landing craft and specially built minelayers. Naval aviation was also in a stage of rearming.

How can one explain that, regardless of the rather strong industrial base and the highly productive work of the experienced and talented designers, the weaponry of the Soviet Army by 1941 for its main types (aircraft, tanks, submachine guns and so forth) was inferior to the weaponry of the Nazi Army?

Several years prior to the attack on the USSR, Germany had converted its economy to the production of modern weapons and this the Soviet Union could not do for foreign policy, economic and other reasons. Moreover, Germany possessed the weapons of 30 Czechoslovak divisions, 92 French, 12 English, 22 Belgian, 18 Dutch and 6 Norwegian. In France alone, the aggressor had captured 4,930 tanks and armored personnel carriers as well as 3,000 aircraft. The Nazi Command outfitted 92 divisions with motor transport using French motor vehicles.(2)

There were also factors of an internal nature. The mass repressions against the leaders of the national economy, the directors of the large, including defense, enterprises and against experienced technical personnel created a situation of nervousness which did not help to make maximum use of the possibility of quickly supplying the Armed Forces with the essential military equipment. Thus, in December 1937, the chief of the RKKA [Worker-Peasant Red Army] Naval Forces, Fleet Flagman 1st Rank V.M. Orlov in a report to the people's commissar of defense on the situation at the Bolshevik Plant wrote: "The plant is the sole plant in the USSR where the designing, development and manufacturing of naval artillery are concentrated. At the given moment the situation at the plant in the designing and development of new models for a major naval program is clearly catastrophic, since, as a result of incorrect leadership and the arrest of virtually all the leading workers in the design bureau which was responsible for the designing of naval artillery systems and guns as well as a number of workers in the plant management and shops..., the plant is almost complete demoralized. Being in such a state the plant, naturally, could not carry out in 1937 either the design work or the program of orders for the Directorate of Naval Forces."(3)

In the prewar years, Soviet military theorists had established an ordered system of views on the conduct of armed combat. The principles of an offensive operation and combat in depth had been worked out and this was to be a substantial step forward in the development of military art. However, the repressions against a significant portion of the command personnel in 1937-1938 was a blow to the development of theory, as it destroyed

or long removed from activity many outstanding and talented military leaders and commanders, precisely those who were actively working out and developing the theoretical problems and whose works were taken out of circulation. As a result of the arrests by the start of the war there was an acute shortage of experienced higher-level command personnel. A majority of leaders from the central directorates of the NKO [People's Commissariat of Defense] and districts had been subjected to repression as well as many commanders of corps, divisions, regiments and various subunits.

By 22 June 1941, over 70 percent of the divisional commanders, up to 70 percent of the regimental commanders and 60 percent of the military commissars and chiefs of the political sections of formations had been in these positions for about a year.⁽⁴⁾ The officers subject to repression were replaced by commanders and political workers who did not have sufficient experience in the leadership of large field forces and formations under combat conditions. During the period of the deployment of the Armed Forces, virtually the entire leading command and political personnel was in a state of flux. The lack of sufficient experience and in a number of instances poor training did not make it possible for the commanders and political workers to quickly master their duties in the area of troop control. All of these circumstances told negatively on the training of the Armed Forces.

In having a detailed theory of the organization and conduct of army and partially front defensive operations, the Soviet military scientists had not worked out thoroughly a theory of the strategic-level defensive. The notion was not even permitted of the breaching of the strategic front by the enemy, as it was assumed in any instance that this breach would be localized by promptly arriving reserves.

The content of the operational exercises conducted in the Western military districts prior to the war points to an underestimation on the part of the Soviet Command during that period of the capabilities of the probable enemy's aviation to thwart the mobilization and deployment of the Armed Forces. The military leaders and theorists did not draw sufficiently sound conclusions from the fact that at the outset of World War II, the Nazi Command carried out a similar task in Poland, Yugoslavia and a number of other countries, precisely using its air forces.

Regardless of the fact that after the December 1940 meeting the combat training of the troops began to be carried out under conditions closer to an actual combat situation, in the training methods there continued to be major flaws. As research has shown, there was a nonobjective assessment of both our own troops and the probable enemy's. Thus, in speaking at a meeting of the military district commanders, the military council members and the district chiefs of staff on 28 December 1940,

the Commander of the Western Special Military District, Army Gen D.G. Pavlov, proved that we were right and indeed obliged to entrust to a tank corps the tasks of destroying one or two enemy panzer divisions or four or five infantry ones. Later on, on 13 January 1941, at a meeting in the Kremlin where all the participants of the December meeting had been invited, the Chief of the General Staff, Army Gen K.A. Meretskov, said: "In working out the Manual, we have proceeded from the view that our division is significantly stronger than a division of the Nazi Army and that in a meeting engagement will undoubtedly defeat a German division. On the defensive, one of our divisions will repulse an attack by two or three enemy divisions. On the offensive, 1.5 of our divisions will overwhelm the defenses of an enemy division."⁽⁵⁾

The Soviet Command, in planning the repelling of Nazi aggression, as a whole correctly determined the strength of the enemy coalition and its forces. The strategic plan for the actions of the Soviet Army was permeated with the idea of launching a powerful retaliatory strike and it had an active offensive nature which corresponded to the spirit of Soviet military doctrine. At the same time, in the planning of the initial operations, substantial miscalculations were made.

First of all, one is struck by the tardiness in working out the plans for covering the Western frontier and this told negatively on the development of events in the initial period of the war. The corresponding plan worked out by the General Staff was issued to the commanders of the border military districts only at the beginning of May 1941, following the directives of the people's commissar of defense. In accord with these directives, the district staffs were to work out their own plans for defending the state frontier and for air defense. The people's commissar of defense had not confirmed these, since they were submitted to the General Staff only on 10-12 June 1941.

A major shortcoming involving severe consequences was the fact that the cover plans were to be put into effect on the day of the declaration or start of war. As a result of this, the troops of the cover armies were not involved in combat training virtually until the invasion by the Nazi aggressors. In our view, mistakes in strategic planning also had a negative effect on the results of the initial period of the war. The NKO and the General Staff felt that a war between such major powers as Germany and the USSR could commence on both sides according to the previously existing scheme: the major forces would engage in combat several days after the border engagements. Here the cover armies for a period of 2 or 3 weeks would hold up the invading enemy troops in the border zone, while the main forces, after mobilization and deployment, would launch a powerful retaliatory strike in the aim of repelling the aggressor's offensive and shifting combat into enemy territory. For this reason, the basic mass of the formations in the border military districts was to move up to the Belostok and Lwow salients where the retaliatory strikes were to be launched.

Virtually all the aviation was stationed at airfields close to the frontier. A predominant portion of the mobilization supplies of weapons, ammunition, fuel and the other materiel of the districts and center was also concentrated close to the frontier and with the start of the war fell into enemy hands.

In terms of the time for concentrating and deploying its main forces, Germany was under the same conditions as our country, although in actuality they were far from equal. The plans of the Soviet Command excluded the possibility of having the enemy achieve predominant superiority in forces over our cover troops at the outset of the war and the seizing of strategic initiative by the enemy for a protracted period. A variation of the forced going over of the Armed Forces to a strategic defensive was not envisaged and this also must be considered among the failings in the planning of the war and in troop training.

As analysis shows, a negative role was also played by the miscalculation in determining the axis of the enemy's main thrust. The most dangerous was considered to be the southwestern (to the south of the Polesye). In actuality the main forces of the army groups of Nazi Germany were concentrated and deployed further north, where, in the event of a success, it would be possible to deeply envelop the Soviet troops concentrated on the Belostok and Lwow salients.(6) Subsequently the enemy was to drive with its main forces to Smolensk and Moscow.

The concentration and deployment of the troops on the eve of the war were carried out differently. A year before, Nazi Germany, in using every means of operational camouflage and political disinformation, moved up the main forces of the invasion army to the Soviet frontiers. By the time of the treacherous attack on our country, it had significant superiority both in the number of troops and in the quality of their technical equipping as well as in the degree of readiness to enter the war.

The Soviet government and Command, under the conditions of the threat of imperialist aggression, in building up the combat might of the Armed Forces, concentrated the basic mass of the regular and newly constituted formations assigned to fight in the initial operations in the Western frontier districts and they, together with the forces of the Northern, Baltic and Black Sea Fleets, comprised the first strategic echelon. There also was based the basic mass of frontal aviation and a portion of long-range bomber aviation. In order to conceal from enemy reconnaissance the size and purpose of the troops concentrated on the territory of the Western districts and to deny the Nazi Command a pretext for provocation, the basic mass of the formations was positioned a significant distance away from the frontier.

From mid May, the 22nd, 16th and 19th Armies and the XXV Rifle Corps began to move up from the interior military districts (Urals, Transbaykal, Northern Caucasus and Kharkov) to a line of the Dnieper and Western

Dvina; the 20th, 24th and 28th Armies also prepared to redeploy. All these troops were to comprise the second strategic echelon. The movements were made by rail transport in observing camouflage measures, gradually, without altering the peacetime traffic schedule. The troops according to the plan were to take up their assigned areas only by 10 June 1941.

In assuming that the enemy would concentrate its main efforts on the southwestern sector, the Soviet Command sent the 19th and 16th Armies there from the interior districts. Just the 22d Army was moved up to the Western sector. In actuality the enemy committed land and air groupings to combat precisely on the Western sector. As a result, the Soviet Command, during the first days of the war, had to regroup the 19th Army and a number of formations from the 16th Army there and without a pause throw them into battle as part of the Western Front.

It must be pointed out that the cover troops of the Western border military districts by the end of 21 June were positioned in their peacetime locations. Thus, 170 divisions and 2 brigades which made up these districts and comprised the first strategic echelon of our Armed Forces had not completed deployment and were scattered along a front of up to 4,500 km in length and from 100 to 400 km in depth.(7)

The Nazi Command in the first echelon of its armies had deployed 103 divisions, including 12 panzer, while in the first echelon of the Soviet cover armies there were just 54 rifle divisions, 2 cavalry divisions and 2 brigades. The enemy formations were fully at strength in personnel, weapons, military equipment and transport. In addition, they possessed greater mobility and maneuverability. The extremely bad position of the first strategic echelon of our troops in comparison with the opposing enemy forces was also one of the main reasons in the unsuccessful outcome of the border engagements for the Soviet Army.

Nor had the troops of the second strategic echelon been completely concentrated. By the start of the war, of the 77 divisions included in it, only 9 formations had arrived at the designated areas, while the remainder were on the way or had remained in their previous positions.

The incompleteness of the measures to establish the initial strategic Soviet Army grouping by the start of the war was a consequence of a number of factors of an objective and subjective nature. The Soviet leadership, while completely recognizing the inevitability of war, had not lost the hope of deferring it in order to gain time to carry out all that had been planned to strengthen the Armed Forces. However, in order that Nazi Germany not employ various actions as a pretext for initiating a war, the measures to concentrate and deploy the troops were not accelerated even in the situation of the growing military threat. Over the last months prior to the start of the war, the opportunity was not employed to carry out

the essential regroupings in the border military districts, to bring the troops to combat readiness, to take up the planned areas and lines, that is, to fully conclude the deployment of the first strategic echelon. The pace of carrying out the measures to establish the grouping did not correspond to the actual situation. The German attack was a surprise for the troops in the border military districts. The cover armies could not stop the enemy on the defensive lines and thereby provide an opportunity for the troops moving up from the interior to enter battle in a more organized manner.

Precisely the miscalculation in determining the date of the German attack, in our view, was at that time the main error which entailed a chain of others in the planning of military operations and in carrying out measures to ready the Armed Forces to repel the aggression.

In preparing the people to defend the socialist fatherland, the Communist Party gave great importance to the their moral and political indoctrination. In using the press, radio and film, the party indoctrinated the people in a spirit of Soviet patriotism and a readiness to defend their motherland. The slogan: "Defense of the fatherland is the sacred duty of each citizen of our motherland" was the most important in this work.

However, this was carried out counting on an easy victory. Inherent to it was an underestimation of the possible enemy and this was expressed in the wrong assertion that the peoples of the imperialist powers would not fight the USSR and the aggressor states would collapse as soon as their armies attacked the Soviet Union. Consideration was not given to the measures carried out by the ruling regimes in these countries to strengthen their rear, the repressions carried out by them and the activities of their enormous propaganda apparatus to dull the masses.

The personnel in the border districts during the complex prewar conditions were not properly informed and were often outrightly misled. For example, in May 1941, one of the political reports in the Baltic Special Military District pointed out how individual comrades arriving from the center, particularly the lecturers, considering that in the troops war against Germany spoken of too bluntly, in their own speeches instilled complacency in the masses of soldiers.(8)

The mistakes of the Soviet leadership in assessing the situation existing on the eve of the war were reflected in the TASS announcement of 14 June 1941. "According to USSR data," stated the announcement, "Germany is observing the conditions of the Soviet-German Nonaggression Pact as steadfastly as the Soviet Union, and because of this, in the opinion of Soviet circles, rumors of Germany's intention to break the pact and initiate aggression against the USSR are devoid of any grounds."(9)

The documents and facts show that the political and military leadership of the Soviet Union even before the start of the war had data on the preparations for a Nazi attack on the USSR. The General Staff had rather complete information on the build-up of enemy forces along our Western frontiers. From various sources, the Soviet Command had received data on a possible enemy attack and the dates of its offensive. The border troops as well as the military councils in the border military districts informed the government and the NKO of the growing cases of the violation of the state frontier by enemy aircraft and agents.

All of this could not pass unnoticed. At the beginning of 1941 and particularly in May-June, the Military Command conducted a series of measures to increase the combat readiness of the Armed Forces as well as implement the cover and troop strategic deployment plan. However, the first army echelons had not been moved up, deployed and brought to combat readiness in accord with the plan for defending the state frontier. The initiative of the district and army commanders in this was not supported by the leadership of the NKO and the General Staff. As a result, it turned out that the troops in the border military districts were completely unprepared to repel the enemy surprise attack.

Thus, it must be admitted that the Soviet Union had a real opportunity to quickly thwart the aggressor's predatory plans but a serious miscalculation in assessing the military-political situation directly prior to the war to a significant degree restricted this. Nazi Germany chose that moment to attack the USSR when the balance of forces deployed directly in the border area was in favor of the German troops, while our army was in a stage of rearming and reorganizing and the troops in the border districts had not been brought to combat readiness. Naturally, the exceptionally difficult conditions of the initial period of the war reflected heavily on its results.

The lessons and experience of the initial period of the Great Patriotic War are of enormous significance. V.I. Lenin pointed out: "It is impossible to learn how to carry out our tasks using new procedures at present if our experience of yesterday has not opened our eyes to the incorrectness of the old methods."(10)

The given article does not claim a complete treatment of the questions involved in the preparing of the Armed Forces to repel aggression directly prior to the war. It would be hoped that subsequent articles would examine in greater detail the problems of conducting reconnaissance on the eve of the war, the providing of a cover against enemy air attack, the particular features of the mobilization and strategic deployment of the Armed Forces, the preparation of the theater of operations, the operational and strategic planning of the initial operations in the aim of repelling the enemy attack. There must also be profound research on the questions of the preparation of the Armed Services, the rear, combat

arms and special troops. The course of military operations in the Baltic, Belorussia and the Ukraine must be examined and analyzed in greater detail, and we must assess the effectiveness of the defense of lines, the employment of reserves, including the mechanized corps, for defeating the enemy assault groupings and restoring the broken defensive front. The time limits for the initial period of the war as well as other questions also require clarification.

We feel that the reasons for our setbacks in the summer of 1941 and their concrete manifestation should be at the center of attention of the researchers. However, it must not be forgotten that in the initial period of the war the enemy was caused serious losses by the heroic efforts of the Soviet military and all our people, and the conditions were established for thwarting its plan for a "blitzkrieg." At this same time, the skill of our military personnel rose and under the leadership of the Communist Party, they ultimately led the Soviet troops to a final victory over the Nazi hordes. Only such an approach to resolving the problem helps, in our view, to restore the truth about the initial period of the Great Patriotic War.

Footnotes

1. "Sovetskiye Vooruzhennyye Sily. Istoriya stroitelstva" [The Soviet Armed Forces. History of Organizational Development], Moscow, Voenizdat, 1978, p. 240.
2. See: B. Muller-Hillebrand, "Sukhoputnaya armiya Germanii 1933-1945" [The German Land Army 1933-1945], translated from the German, Moscow, Voenizdat, Vol 2, 1958, p. 143.
3. TsGA VMF [Central State Archives of the Navy], folio R-840, 4 ct., file 168, sheet 35.
4. "Velikaya Otechestvennaya voyna Sovetskogo Soyuza 1941-1945: Kratkaya istoriya" [The Great Patriotic War of the Soviet Union 1941-1945: A Concise History], Moscow, Voenizdat, 1965, p. 40.
5. M.I. Kazakov, "Nad kartoy bylykh srazheniy" [Over the Map of Past Engagements], Moscow, Voenizdat, 1971, p. 58.
6. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945], Moscow, Voenizdat, Vol 4, 1975, p. 25.
7. Ibid., Vol 3, 1974, p. 441.
8. "Borba za Sovetskuyu Pribaltiku v Velikoy Otechestvennoy voynе 1941-1945" [The Struggle for the Soviet Baltic in the Great Patriotic War of 1941-1945], Riga, Book 1, 1966, p. 46.
9. "Istoriya vtoroy mirovoy...", Vol 3, p. 440.

10. V.I. Lenin, PSS [Complete Collected Works], Vol 44, p. 205.

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Technical Cover of Railroads

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[Article, published under the heading "Military Economy and Rear Services," by Maj Gen F.F. Gusarov, candidate of technical sciences, professor; Lt Col L.A. Butakov, candidate of technical sciences: "Technical Cover of Railroads"; the article is based on the experience from the first period of the Great Patriotic War]

[Text] On the eve of the war, in 1940, the railroads carried 85.1 percent of the total freight turnover of all types of transport.(1) Understandably in wartime rail transport should play a crucial role in the transport support of the USSR Armed Forces. For this reason in preparing the nation for defense, measures were energetically carried out to further the strengthen and develop the railroads. Nevertheless, during the prewar years a reliable system for quickly eliminating the consequences of enemy air strikes was not prepared. In particular no consideration was given to the combat experience in Poland and France, where German aviation by intense raids quickly paralyzed the operations of rail transport. It was erroneously assumed that the consequences of air raids against rail objectives and sections could be eliminated by the forces of the corresponding line railroad subdivisions such as the track divisions, signal, the steam locomotive departments and so forth.

The start of the war showed that the capabilities of enemy aviation in operating against the railroads had been underestimated. Air supremacy made it possible for the enemy even on the first 2 days of the war to destroy over 100 important railroad facilities. From June through December 1941, every 24 hours there was an average of 33 air raids against the nation's frontline railroads.(2) This disrupted our troop movements, their supply with materiel and prevented the evacuation of the populace and materials from the threatened areas. Areas located close to the front line were subjected to particularly fierce bombing. Under these conditions, the rapid elimination of the consequences of the enemy air strikes assumed vitally important significance. The operational workers made every effort to carry out this task, but they alone could not do this as the placement and equipping of the line railroad subdivisions were determined by the requirements for operating the corresponding sections and facilities. They had not been instructed in rebuilding the railroads and were not prepared for this.

Upon the decision of the Politburo of the VKP(b) [All-Union Communist Party (Bolshevik)] Central Committee, as of 30 June 1941, under the fronts they introduced the position of agents of the People's Commissariat of the Railroads [UPS]. They were immediately subordinate to the people's commissariat and in terms of troop movements, the rebuilding and protecting of railroads, they carried out the requirements of the front commanders. Under them were the chiefs of the railroads, the reconstruction and operational formations of the NKPS [People's Commissariat of Railroads].(3) It was assumed that the agents would coordinate the actions of the operational and construction workers and in the interests of the front achieve uninterrupted operation of the railroads. Upon the instructions of the agents, NKPS construction organizations could be involved in eliminating the consequences of the air raids and the railroad troops could do the same upon the instructions of the chiefs of military railroads of the fronts. Along with carrying out their main tasks of protecting the railroads, the military railroad workers eliminated the consequences of enemy air strikes and helped evacuate valuable property as well as develop the railroad stations.

In the documents of those years, **this entire range of jobs was called the servicing of railroad sections.**(4) Thus, at the beginning of July 1941, the Commander of the 5th Railroad Brigade, Col P.A. Kabanov, received from the Chief of Military Railroads of the Southwestern Front, Col I.G. Korshunov, orders to service the railroad line Darnitsa—Nezhin—Bakmach—Vorozhba with the adjacent lateral lines with a total length of around 720 km.(5) During the same period analogous tasks were received by the commanders of other railroad brigades operating in the border areas. Overall leadership and responsibility for eliminating the consequences of air raids were entrusted to the chiefs of the corresponding railroads and in certain instances, to the commanders of railroad brigades. For example, on 18 July 1941, the Chief of Military Railroads of the Northwestern Front,

Maj Gen Tech Trps I.G. Kashcheyev-Semin sent to the commanders of the 15th and 30th Railroad Brigades the following telegram: "Elimination of all destruction on your railroad sections carried out by enemy air raids as well as by saboteurs is entrusted to you. For eliminating the destruction you are given the right to use all reconstruction facilities of the UPS-9."(6)

Sections assigned to brigades were divided into battalion and company. However, this organization was only the embryo of a system of technical coverage for the railroads, since in locating the railroad troop subunits by the sections, they chiefly considered the tasks of protecting the latter, while the railroad chiefs still did not possess TOE forces specially assigned to eliminate the consequences of the enemy air raids. The standards for the railroad units and other organizations in the area of the technical cover (servicing) of the sections were not set. Due to the shortage of transport and the confusion in leadership, at times a great deal of time was spent on concentrating the personnel, equipment and essential materiel in the areas of destruction. The troop train traffic schedule was frequently disrupted.

For centralizing control over the actions of the subunits in eliminating the consequences of air raids and for shortening the interruptions in train traffic, the people's commissar of railroads, upon the demand of the GKO [State Defense Committee] on 16 September 1941, issued an order to organize a Military Reconstruction Directorate of the NKPS which would be based upon the reconstruction section of the Military Mobilization Directorate of the NKPS, while military reconstruction services would be organized on the 19 front and near-front railroads. Within the traffic divisions, military reconstruction sections were organized and on the basis of the track and signals districts there would be the corresponding specialized military reconstruction districts. The military reconstruction services received mobile reconstruction formations (see the Table).

Mobile Reconstruction Formations

Name of formations	TOE size, men	Sample operating range, km	Main tasks
Reconstruction train	6-26	50-70	Clearing track of rubble
Fire train	to 20	50-60	Extinguishing fires
Track repair mobile unit	30	40-50	Eliminating destruction of track on lines & small stations
Signal repair mobile unit	20-30	50-60	Elimination of destruction to communications and automatic interlocking
Water supply repair mobile unit	to 20	100-150	Quick repair of water supply
Bridge repair mobile unit	to 25	20-25	Eliminating damage on man-made structures
Contact grid repair mobile unit	to 20	20-25	Repair of contact grid
Specialized and complete road repair trains	100-500	150-400	Elimination of major destruction to railroad structures

The reconstruction trains possessed tractors and railroad cranes. A mobile repair unit was a reconstruction subunit which had flatcars and boxcars with a supply of repair

materials and equipment loaded on them. The personnel was housed in barracks and this ensured the rapid departure of the train (repair unit) to the site of destruc-

tion on the railroad embankment. The repair materials were provided from the supplies of roads, local procurement and the disassembly of low-traffic lines.

With the formation of the military reconstruction service, a portion of the technical cover forces received permanent TOE. But the capacity of the trains and mobile repair units was insufficient for quickly eliminating the consequences of the massed enemy air raids against bridges, junctions and large stations. For this reason, upon the orders of the chiefs responsible for the operation of the corresponding sections and installations and upon their own initiative, the line railroad subunits took an active part in rebuilding the roads as before. Under the orders of the NKPS and the command of the fronts, other railroad reconstruction and construction organizations were involved in the work. By a GKO decree, with the approval of the oblispolkoms, the local populace could be employed for these purposes and with the agreement of the military command, the combined-arms units.

The technical cover forces which eliminated the consequences of the air raids up to the end of 1941 were not united in organizational terms. Thus, the formations of the military reconstruction services and the line railroad subunits of the NKPS were subordinate to the chiefs of the railroads while the railroad construction organizations were under the chief of the Central Directorate of Railroad Construction. But the brigades of the Special Corps of Railroad Troops were subordinate to both the NKPS and the NKO, while the remaining railroad brigades were only under the NKO through the military railroad bodies. Only due to the fact that all the railroad workers, regardless of subordination, were caught up in the same patriotic desire to eliminate as quickly as possible the consequences of the enemy air raids was this work carried out without great delay. The Nazi Command did not succeed in paralyzing our railroads.

During the period of the defense of Moscow, the enemy made 375 air raids against the main railroad sections of the Western and Kalinin Fronts with a total length of 1,100 km.(7) However, regardless of the serious interference, troops movements over the railroads of these fronts continued. Their total volume was around 293,000 cars.(8) A significant role in supporting traffic was played by the 1st, 4th, 6th and 26th Railroad Brigades participating during the Battle of Moscow both in the cover and in the defense of the railroads.

On the Southwestern Sector extensive work was carried out by the 5th, 13th, 19th, 25th, 27th, 28th and 29th Railroad Brigades. Each of these in August-September 1941 covered and at the same time prepared to defend major railroad sections with a total length of from 400 to 600 km.

Regardless of the unstinting work by the railroad workers, the pace of railroad reconstruction was low due to the insufficient technical equipping of the railroad troops, the poor supply of the latter with repair materials as well as the absence of unified leadership over reconstruction work on the part of the NKO and NKPS. On the Western Front, the pace of railroad reconstruction averaged just 3.6 km a day.

For eliminating the designated shortcomings, leadership over all reconstruction and protective work in January 1942 by a GKO decree was entrusted to the NKPS. The Main Directorate of Military Reconstruction Work (GUVVR) organized within it brought together all the major reconstruction organizations, the NKPS special formations and railroad troops. On the fronts, they organized directorates of military reconstruction and defense work (UVVR) and head depots of repair materials were organized. The chief of this directorate was subordinate to the chief of the GUVVR of the NKPS as well as to the commander of the front. The system of forces subordinate to the railroad military reconstruction services was not changed here.

All of this made it possible for the command of the fronts and the NKPS, when necessary, to shift the railroad troops and NKPS special formations for reinforcing the technical cover of the most important front railroad sectors and improved conditions for their cooperation with the railroad military reconstruction services. An example of such cooperation was the organizing of a technical cover according to a jointly elaborated plan for the Murmansk—Maselskaya section with the adjacent sectors (1,042 km) by the forces of the military reconstruction service of the Kirov Railroad and the UVVR of the Karelian Front.

The Kirov Railroad linked the national railroad network with the port of Murmansk, the bases of the Northern Fleet and supplied the troops of the Karelian (up to 1 September 1941, the Northern) Front. From 1 July 1941 through 20 July 1942, some 1,729 air raids were made against it, and 7,350 high explosive bombs and 37,000 incendiary bombs were dropped on it. The main objectives of the raids were the large stations and junctions of Murmansk, Loukhi, Kandalaksha and Kovda. At the same time, the enemy bombed the tracks which were poorly defended by air defense weapons.

The military reconstruction service of the railroad formed 5 military reconstruction sections, 15 track reconstruction districts, 22 signal districts, it organized 12 track mobile repair units, 8 mobile bridge repair units, 13 signal mobile repair units, 5 for water supply and 7 for the rebuilding of the contact grid. It was given 10 reconstruction trains, 10 fire fighting trains and 4 specialized road reconstruction trains. The total personnel of all these units and subunits was approximately 2,700 men. The UVVR of the Karelian Front by April 1942 had specially assigned for the technical cover of the sections some 3 reconstruction battalions, 2 operational

companies and 17 different special reconstruction formations numbering a total of around 4,500 men. Here the UVVR forces covered the sections and installations which were subject to the strongest raids. Thus, the 6th Separate Railroad Reconstruction Battalion (commander, Maj G.S. Tskhay-Nikityev) covered the Murmansk junction and repaired not only the railroad but also port facilities. Units of the military reconstruction service rather quickly repaired the numerous minor destruction on the sections between the most important facilities. Such an organization of the technical cover ensured dependable operation of the Kirov Railroad under the conditions of intense enemy air raids.

As is known, in the spring of 1942, a relative lull occurred temporarily on the fronts. In line with this, enemy aviation shifted its main efforts to rear facilities, particularly the railroads of the Kalinin, Western and Bryansk Fronts. The strengthening of the cover for these railroads was assigned to the railroad troops. A competition got under way in the units and subunits for shortening the time to restore traffic on the sections destroyed by Nazi aviation. The 6th and 15th Railroad Brigades (commanders, D.A. Teryukhov and V.V. Bezvesilnyy) of the Kalinin Front worked out instructions to eliminate the consequences of enemy air raids. The subunits drew up planning tables which reflected the experience gained by this time in patrolling the sections, extinguishing fires and carrying out repairs. The deactivators of delayed-action bombs carried out their tasks unstintingly.(9)

Thus, on 25 May 1942, in a raid on a train travelling along the section Andreapol, Okhvat only flatcars and a length of track were damaged. However, in order to restore traffic three delayed-action bombs had to be deactivated. The leaders of the reconstruction team of the 35th Mechanization Battalion of the 5th Railroad Brigade, Sr Lt G.P. Gryaznov and the Junior Political Instructor A.U. Khmel'nitskiy, in disregarding the danger, carried the bombs to the side and blew them up. Some 50 minutes later the section was ready for operations.(10)

The tasks of the technical cover for the railroads became particularly complicated during the period of the Stalingrad Defensive Operation. The enemy subjected the railroads of this section, including the small stations and local tracks, to fierce bombing. Against each kilometer of the Stalingrad Traffic Division an average of 98 bombs was dropped (according to incomplete data). There was an average of 5 air raids a day against the lateral line of Urbakh, Astrakhan on the other side of the Volga.(11)

In such a situation, the rapid elimination of the consequences of the enemy air raids was of great importance, particularly under the conditions of the poorly developed railroad network and the low capacity of the railroad sections of the Stalingrad Division. Responsibility for carrying out this task was entrusted to the railroad troops. They were to prepare the sections for

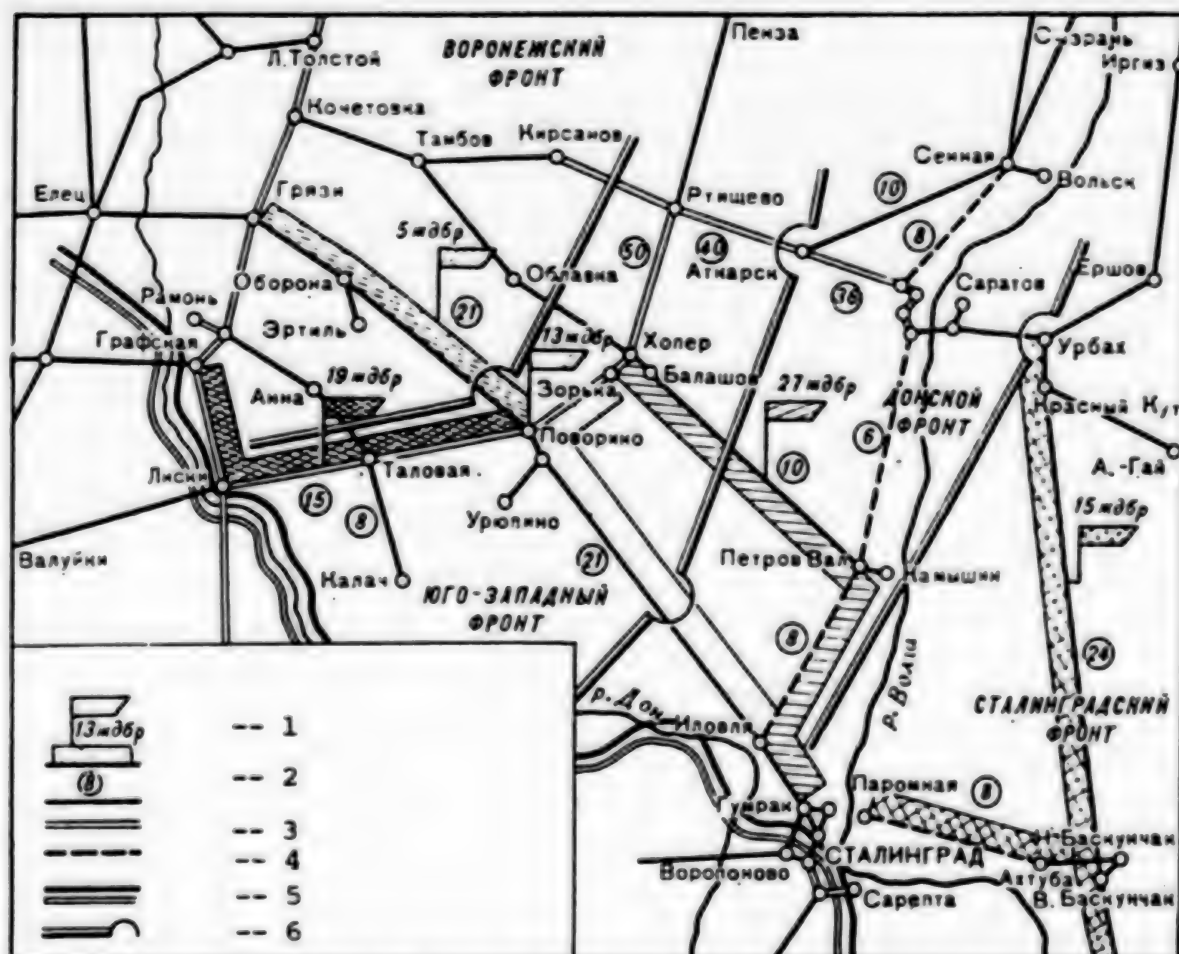
defense, raise their capacity and develop the railheads. This entire range of work in the orders of the GUVVR and the UVVR as before was called the servicing of the railroad sections. In those instances when it was a question of eliminating the consequences of air raids or enemy sabotage, most often the documents of the Voronezh Front (UVVR Chief, Maj Gen Tech Trps P.A. Kabanov) employed the term "technical cover."(12)

The particular features of the technical cover for the railroads on the Stalingrad sector in October 1942 are shown in the diagram. Each brigade covered railroad sections with a total length from 236 to 772 km (in October 1942, the section of Urbakh, Astrakhan some 772 km long, in addition to the 17th Railroad Brigade also was assigned the 46th and 47th Railroad Brigades).(13) As on the Kalinin Front, the brigade sections were divided into battalion sections assigned considering the intensity of air strikes and the production capability of each brigade. For securing the sector and for detecting centers of destruction, they organized the patrolling of the legs by two-man patrols (one per 2-3 km). Listening posts were set out by bridges. The reconstruction team was summoned by the patrols or the train brigade with the aid of rockets or a field telephone tapped into the communications line.(14)

Trains carrying ammunition and fuel were escorted by specially assigned mobile assault groups formed from the most courageous and determined soldiers. In the event of an enemy attack the group immediately unhitched and separated the rolling stock, localized and extinguished the fire. The basic personnel of a platoon or company was called in for more extensive reconstruction work. The early dispersion of the subunits along the battalion section made it possible to quickly concentrate the necessary forces at the centers of destruction. For this they used the railroad reconstruction mobile units or rolling stock at hand. There was not enough motor vehicles. For example, in the 46th Railroad Brigade (commander, Col A.D. Shishkin) which in October-November 1942 covered the sections of Gmelinskaya, Verkhniy Baskunchak, Nizhniy Baskunchak; Nizhniy Baskunchak, Vladimirskaia Pristan, Akhtuba, Zaplavnoye with a total length of 358 km had just 9 motor vehicles.(15)

For accelerating the clearing of the track of destroyed and burned-out rolling stock on the Voronezh and Stalingrad Fronts in August 1942, they organized special crane companies equipped with railroad cranes and rigid reconstruction standards were set. The consequences of enemy raids on track and small stations were eliminated, as a rule, in 2 or 3 hours. If traffic was interrupted for more than 4 hours, an investigation was carried out.

The railroad workers showed great courage in salvaging burning cars with various supplies. Thus, the 2d Company of the 84th Track Battalion of the 13th Railroad Brigade (commander, Col B.I. Pavlov) rescued from the flames at Kachalino Station some 200 loaded boxcars, a



Organization of Technical Cover for Railroads in Defensive Engagement at Stalingrad (October-November 1942)*

Key:

- 1—sections covered by railroad brigades
- 2—single-track sections, their capacity
- 3—double-track sections
- 4—lines built on eve and during the operation
- 5—front line
- 6—front demarcation lines

food and a supply dump. The company was under the command of Capt K.I. Yermishkin. Particularly distinguishing themselves were the men candidate member of the VKP(b) V. A. Pechenev and the Komsomol member A.A. Cheppe. When they were unhitching tank cars, a tank car loaded with gasoline caught fire. Pechenev, disregarding the flames, climbed up on it and in burning his hands, opened the hatch. An explosion was prevented. Regardless of the continuing bombing and the explosions of shells in the burning cars, Cheppe under a hail of shrapnel threw the switch and provided and opportunity to move 50 tank cars carrying gasoline away from the flames.(16)

Experience showed that bridges were destroyed relatively rarely but a great deal of time was required to

rebuild them. Interruptions in train traffic in the event of their destruction usually were several days. Repairs were carried out chiefly by the bridge battalion or by the bridge building trains. Collapsed span structures were raised by jacks to the surviving supports or replaced with new ones set using various types of roller devices. Emergency supplies of repair materials were stocked up ahead of time.

Thus, by the end of 1942, an ordered system of technical cover for the railroads had come into being and this included a range of measures and jobs carried out in the operating railroads by specially assigned forces for quickly restoring train traffic. This was ensured by the complete preparation of the forces and facilities for repair work as well as by the rebuilding of destroyed

facilities for quickly resuming through train traffic with the subsequent boosting of capacity up to the required amounts.

During the time free from the jobs of eliminating the consequences of enemy air raids, the railroad units and other organizations providing the technical cover for the sections increased their capacity and survivability. For example, the forces of the 15th and 46th Railroad Brigades lengthened the station tracks, they built 20 new sidings, they reinforced the track on the runs and built bypasses for the stations of Pallasovka, Elton, Verkhniy Baskunchak, Akhtuba and Ashuluk which were subjected to the strongest enemy air raids.(17) As a result, the capacity of this line rose. It could handle not 9 pairs of trains a day as was the case previously but 24 of them.

Dependable technical cover prevented the enemy from knocking out the railroads leading to Stalingrad. From July through December 1942, over 200,000 cars carrying troops and materiel were delivered to the Stalingrad area.(18)

Thus, for rapidly eliminating the consequences of air raids on railroad facilities, it was essential to have special forces, their correct placement along the operating sections and thorough preparation of the personnel for rebuilding the facilities. The railroad troops successfully carried out this task. The system of reconstruction work on the railroads was gradually improved and in 1942, became an inseparable part of the transport support for the operations. In a number of documents it began to be termed the technical cover of the railroads.

The technical cover was organized considering the operational and rear situation, the tactics of the enemy air raids, the importance of the covered sections and facilities and the availability of reconstruction forces. Patriotism and close cooperation of the military and civilian railroad workers during the difficult first period of the war for the railroads helped ensure the minimum necessary troop and national economic movements.

Footnotes

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13. Ibid., folio UVVR-8, inv. 91014, file 1, sheets 40-42.

14. Ibid., inv. 27375, file 12, sheets 23-25.

15. Ibid., inv. 91014, file 1, sheets 40-42, 122.

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Combatting Airborne Assault Forces
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ZHURNAL in Russian No 4, Apr 88 pp 59-65

[Article, published under the heading "World War II," by Col A.F. Bulatov, candidate of military sciences: "Combatting Airborne Assault Forces"]

[Text] Airborne troops were employed on a mass scale on the battlefields of World War II. They were used in all theaters of operations both as small groups as well as large formations with the most diverse aims: from conducting sabotage to the independent carrying out of operational-strategic tasks.

An important role was assigned to airborne assault forces in Hitler's plans for a "blitzkrieg." They were used in capturing Poland (1939), Norway, Belgium and The Netherlands (1940) and the island of Crete (1941).

On the Soviet-German Front, the Nazi Command landed small paratrooper forces and reconnaissance-sabotage groups for disrupting command and rear support, for capturing bridges, airfields and for carrying out other tasks. In particular, on the very first day of the war, in the zone of the Southwestern Front, paratroopers were detected in the area of Kovel, Dubno, Radekhov, Stry and Chernovtsy.(1)

In the favorable situation created by the victories of the Soviet troops on the Eastern Front, a number of airborne operations was conducted by Anglo-American troops in Europe. The largest of these were: the Sicilian (1943), Normandy and Arnhem (1944) and Rhine (1945).

As a total during the years of World War II, over 150 airborne assault forces were landed and of these around 10 were of operational and operational-strategic importance.(2)

The improvement in the airborne troops and the increased scale of their employment with the outbreak of war required that the belligerents search for effective methods of combating them. It must be emphasized that the European countries which were the first victims of Nazi aggression were virtually unprepared to carry out this task. The reason for this was the sceptical attitude on the part of the Western military specialists to the possibility of widely using airborne forces with the then-existing level in the development of fighter aviation and antiaircraft artillery as well as due to the high operational troop density in Europe.

By the start of World War II, the Soviet Army had elaborated an ordered system of views on this problem and this system was adjusted considering the experience gained in fighting in the West. The system assumed: the establishing of zones of responsibility for the destruction of the landed troops and the assigning of forces for this purpose; reconnaissance, observation and warning; the organizing of security and defense of major installations;

the building of obstructions and carrying out other measures. There were plans to involve in this combat aviation, units of the Soviet Army and the NKVD [People's Commissariat of Internal Affairs] troops, the armed security of the installations which might be attacked and, finally, the local population.

The zones of responsibility of the formations and field forces for destroying landed (dropped) enemy groups were usually within the defense zones assigned to them and in terms of depth included: for divisions—the regimental rear areas to the second line; for corps—the areas of the organic rear to the army zone. In the army zone and directly behind it the combating of airborne assault forces was carried out by army forces and further in depth by front ones.

The formations and units comprising the reserve, as a rule, were given the battle task of destroying paratroopers within a certain area. The forces had to be allocated and positioned in accord with this task. The assigned area was broken up into sectors and the latter into sections. A chief was responsible for each of these. The size of the sectors and sections, their position and the size of the forces assigned to each of these were determined depending upon the complexity of the set task, the importance of the facilities existing in the area, the number and sizes of probable drop areas and the nature of the terrain. In all instances they recommended assigning a sufficiently strong, maneuverable reserve and to position this in the central part of the area or deep in the sector, ready to fight on any axis.

Serious attention was given to organizing communications between the sectors, sections and within the latter as well as the antiaircraft forces positioned here.

The experience of the war in the West showed that an army without the help of the populace was unable to detect and destroy small assault groups and reconnaissance-sabotage groups of Nazi troops in those areas where there were neither troop nor police garrisons.

For this reason, in our nation from the very first days of the war, the local population was involved in combating airborne assault forces in the frontline zone. By the end of July 1941, from the population they had already organized 1,755 hunter battalions numbering over 328,000 men. As a total during the war years, around 400,000 persons were in them. Moreover, over 300,000 persons were members of the assistance groups for the hunter battalions.(3) The task of the latter was to observe and quickly notify the nearest troop units, hunter battalions or police bodies about enemy aircraft and paratroopers.

Due to the measures taken, the use of assault forces by the Nazi troops on the Soviet-German Front did not provide the effect which aggressor was hoping for and did not become widespread.

The experience of the war showed that it was very important to promptly detect the enemy's preparations for conducting an airborne operation, to ascertain the time of its start, to establish the forming-up places and enemy landing areas, its forces, the possible nature of actions and the objects of attack as well as immediately warn our troops of the pending threat.

The tasks of detecting the enemy in the forming-up areas for the assault were usually carried out within the general system of enemy intelligence measures. It must be pointed out that more often it was possible to detect ahead of time the preparations for conducting a major airborne operation. For example, this was the case in the invasion of Nazi troops in Holland and Belgium and on the island of Crete. Air and clandestine intelligence by the Germans even long before the start of the American and English landing in Normandy had warned of the probability of their use of large airborne forces.

Intelligence was of particularly important significance. Without reliable data on the size, the landing areas and the intentions of the enemy, it was impossible to take a correct decision for destroying it. The carrying out of this task was often impeded by the scattering of the paratroopers over a large area, by the dropping of small feint groups, paratrooper dummies and the carrying out of other deception measures. World War II is rich in such examples. In particular, the Command of the Dutch Army in May 1940, after the landing of numerous German groups a majority of which was small and purely feint, was unable to completely understand the situation and did not act in the best manner. In the Normandy Landing Operation the American and English paratroopers spread out over a large area. Moreover, the Allies in a number of areas dropped dummies and employed metallized strips. The disoriented German Command could not correctly assess the actually existing situation and held up the commitment of its operational reserves against the landed enemy for 18-20 hours.

In our country, reconnaissance of the assault forces was assigned to the network of the stationary air observation, warning and signals posts (VNOS) and the observation posts. The latter were set up both in the troops and also on kolkhozes, sovkhozes, at railroad stations, industrial enterprises and other places. In the zones of responsibility of the defending troops, patrols by mobile sentries were organized for the most dangerous areas. In the rear areas this work was carried out by patrols from the local population. Their employment in the mobile and stationary observation posts made it possible to significantly reduce the troop details and maintain their forces for destroying the airborne assault parties. In urban areas for the probable landing zones they set up observation by the joint efforts of the troops, the police, the hunter battalions, the armed security of important installations and civilian organizations. For warning of an enemy drop (landing) they used the troop signals system, the communications of the VNOS posts, the local telephone network as well as mobile equipment and visual signals.

The war required the organizing of dependable security and defense of rear facilities the capturing of which was the aim of the airborne assault forces. The defenses were usually all-round. The subunits and guns ahead of time were assigned firing sectors (arcs), and the procedure for firing, the methods and signals for warning were set. Trenches for the personnel, positions for the weapons, minefields and wire obstacles—this was the minimum needed to organize the defense of an installation. If time permitted, the scale of construction was widened. In areas particularly favorable for a landing, they drove in stakes, set up fences, made piles of stones or of other material. Special antiassault obstacles were erected. These were posts some 15-30 cm in diameter and 2.5-3.5 meters long driven into the ground to a depth of 30-60 cm some 22-30 meters apart. These posts were wrapped with barbed wire and connected to activated artillery shells and mines.(4)

The defenses were organized considering the repelling of assaults both by groups which had landed directly on the installation or near it as well as the those which could appear a significant distance away. This was organized primarily by the TOE personnel of the facilities and which was trained to carry out tasks in accord with the order of battle. Combat subunits were also assigned to defend the most important of these.

The direct cover of the installations from the air was provided by the available antiaircraft weapons and small arms fire. The antiaircraft weapons were positioned in such a manner as to hit the aircraft, gliders or the paratroopers directly over the defended objective or around it, considering the possibility of employing their fire to hit ground targets.

Particular attention was given to the covering of airfields the capture of which by the paratroopers with the subsequent landing of major forces on them was the basis of the tactics of the Nazi airborne troops. Where the airfield defenses were secure, enemy actions usually involved heavy losses. For example, in The Netherlands, under the conditions of the threat of a German invasion, the airfield defenses in the area of The Hague were significantly strengthened. As a result, the first wave of the Nazi airborne assault force dropped by parachute to capture the airfields of Falconburg, Eipenburg and Okenburg was almost completely destroyed.(5)

The English troops, in organizing the defenses of Crete, also did a great deal to strengthen the defense of airfields. Defensive positions were organized around the latter making it possible to control their territory with fire. And here the first assault by German paratroopers on 20 May 1941 ended in a failure.(6)

In Normandy, the Nazi troops had all of the most important facilities under guard. Houses and structures close to which aircraft and gliders could land were equipped for all-round defense and the antiaircraft cover of these areas was strengthened. Prevailing heights were

equipped with weapons pits, trenches and shelters. However, by June 1944, the engineer plan for the coast of the Baie de la Seine had been only 18 percent completed.(7)

The wartime theoretical views envisaged the **bombing of the airborne assault forces in the forming-up places for the assault** and their defeat during the flight by the fighter aviation and antiaircraft artillery forces. However, the war did not provide examples of more or less successful actions of this sort. The main reason for this was that in practical terms all the major airborne operations were carried out with full air supremacy by the attacking side and this clearly doomed the defenders to passive actions. In such a situation, individual attempts to attack the enemy in the forming-up areas for the assault did not bring the desired results. The English, for example, in May 1941, several times bombed the military air transport airfields and the German troops in the concentration areas (in the south of Greece) preparing to invade Crete. Since the forming-up areas of the Nazis were beyond the range of the English fighters (120-140 km), the bombing was carried out without their escort by small groups of aircraft and solely at night. Naturally, these strikes were not sufficiently effective and were unable to prevent the start of the airborne operation.

During the overflight, the assault troops were securely covered by aviation. Thus, in the Rhine Airborne Operation of the Allies in March 1945, some 889 fighter escorted the aircraft and gliders with the assault force in the air. Moreover, 1,253 fighters cleared the airspace over the landing area while 900 fighter bombers neutralized the targets on the ground.(8) It must be emphasized that in this operation the German antiaircraft weapons put up significant resistance to the landing and, regardless of the massed bombings by the Anglo-American aviation, they were not suppressed. From their fire the Allies lost 53 aircraft and 37 gliders; 440 aircraft and 300 gliders were damaged.(9)

The limited opportunities for hitting the airborne assault forces in the forming-up areas for the landing and during the flight led to a situation where the basic burden of combating them shifted to the drop (landing) areas.

The early **preparations of artillery fire** against such areas proved effective, but this required careful coordination with the actions of other forces. In 1944, for example, the Nazi troops in waiting for the Allied landing in Normandy prepared artillery fire against all likely areas. However, at the moment of the parachute drop, German patrols were in these areas or close by and for this reason the artillery troops were unable to fire and a majority of them was captured without getting off a single round.(10)

Of primary importance in combating landed airborne assault forces were the **presence of battle-ready forces** for carrying out the designated task and the **speed of their commitment to action**.

Combat experience showed that an assault even by insignificant forces, usually by tanks, with artillery support and carried out during the drop, the assembly and the recovery of combat readiness by the assault subunits could lead to the defeat of the numerically superior forces. Thus, the 1st English Airborne Division which landed on 17-18 September 1944 to the west of Arnhem was virtually immediately attacked by the units of a German panzer corps which were nearby for reconstituting. Over a period of 8 days, the division fought while encircled losing up to 7,600 men and during the night of 26 September, retreated back beyond the Lower Rhine, without having carried out its task.(11)

Conversely, a delay with the start of active operations against the paratroopers always helped them. Precisely the delay was one of the reasons for the defeat of the English troops in the fighting on Crete and they, in waiting for a Nazi landing from the sea, missed a good opportunity for a decisive assault on the Nazi airborne force. This moment arose at the end of the first day of fighting (20 May 1941), when the paratroopers, in suffering heavy losses (in certain battalions this reached 60 percent of their total number), had been unable to capture a single airfield for receiving the airlanded force.(12)

In combating a landed enemy it is also extremely important to get by with minimum forces and not allow the advancing side the opportunity to commit all available reserves to the sphere of combat and thereby achieve the set goals.

The unsuccessful actions by the Command of the Dutch Army in May 1940 are characteristic in this regard. Dropped along a wide front and in large numbers, the German paratrooper detachments of varying size tied down the main forces of the I Army Corps which was in the reserve. In the general confusion, in fearing the dropping of significant reinforcements, the Dutch Command pulled a number of units from the front and this facilitated the advance of the Nazi troops.(13)

In Normandy, the Nazi Command did not have sufficient forces in the landing area of the American and English airborne forces. The German troops were concentrated on the coast of Pas de Calais. On an extensive area of the coast of the Baie de la Seine, where the Allied landing was to be made, only three German divisions were on the defensive and two of these were without motor transport. The presence of such insignificant and weak forces which, in addition, were extended along the front, impeded the maneuvering of reserves and put the Germans in a very difficult situation.

The conditions for the maneuvering of operational reserves located in the Paris area were extremely complex. Allied aviation destroyed or put out of use all the bridges across the Seine between Rouen and the nation's capital and they damaged a significant number of railroad junctions and other facilities. At the same time, the

fighters of the Resistance intensified sabotage on the railroads. As a result, by the start of the operation, the landing area had been sealed off from the remaining part of France.

The German staffs on the night of the invasion, in being guided by the received information, dispatched troops to those points where the landing was to be made. As a consequence of the wide scattering of the paratroopers, individual small engagements broke out over a vast expanse. The commanders of the Nazi units lost the opportunity of controlling their subunits which everywhere had to fight independently. The airborne troops tied down the Nazi troops defending the coast, they destroyed bridges, disrupted command, they impeded the arrival of reserves and thereby aided the sea landing.

In the course of the war, various **methods of destroying landed airborne forces** were employed. These were determined depending upon the specific situation, primarily the nature and amount of information about the enemy (its strength, combat capabilities and actions), the availability and readiness of friendly troops, the terrain conditions and other factors.

With a circular defensive area of the paratroopers, an offensive against them was carried out by launching attacks on one or several lines. An attack from one line was employed in the absence of sufficiently complete information about the enemy and the terrain as well as if the available forces did not make it possible to employ another method of action. The advantages of this were the speed and simplicity of maneuver, the possibility of concentrating a maximum number of forces on the chosen sector as well as the simplicity of command. Its main drawback was that the landed troops could shift reserves from unattacked sectors to the threatened line.

If information on the strength of the landed forces and the particular features of the terrain were sufficient and the defending troops had superiority or high mobility, the assaults were launched from different directions along converging axes. This made it possible to split the airborne assault force into individual parts, to isolate them and destroy them one by one. However, such a method led to the scattering of forces, it complicated their control and required more time to prepare for combat.

When the main assault forces after landing had begun to move up against the object of attack, they were defeated in a meeting engagement. Here frontal strikes were employed as well as tying down from the front with the simultaneous launching of attacks against one or both flanks. An attack from the front was planned in those instances when the landed troops were advancing in a broad zone or it was impossible to reach their flank. By an advance of the main forces on a narrow sector, it was possible to split the enemy into two groupings and their subsequent piecemeal destruction was ensured.

Under conditions when the available forces could not destroy the landing troops, the main efforts were focused on covering the most important installations which were threatened by capture or destruction as well as the sealing off of the enemy in the landing area. This was how the Nazi troops fought the American and English airborne forces because their main forces were fighting on the Soviet-German Front.

After World War II, in the opinion of foreign specialists, the conditions for employing airborne assault forces and combating them have substantially changed. First of all, there were fundamental qualitative shifts in the technical equipping of the airborne troops, in their structure and methods of combat employment. The military air transport had become different and the equipment was modernized. There has been development of no-landing assault equipment which makes it possible to drop the troops on unprepared areas at a rapid pace.

Helicopters have begun to be ever more widely employed for ferrying troops along with the military transport. Due to the sharp rise in the effectiveness of weapons, the new equipment has created prerequisites for a significant increase in the capabilities and the depth of employing airborne assault forces. A simultaneous effect to the entire depth of the operational configuration of the opposing groupings not only by weapons but also troops (airborne and aeromobile) has become a leading trend in the development of military art.

All of this shows that in present-day operations, the tasks of combating airborne assault forces is even more pressing than in the past. The experience gained on the battlefields of World War II can provide great help in carrying this out. Essentially maintaining their importance are such ideas as: the territorial principle of responsibility for various command levels for the organizing and conduct of combat against landed groupings; the importance of establishing an effective system of reconnaissance and warning (including in the rear of our troops) and capable of promptly spotting the enemy's preparations to conduct airborne and aeromobile operations and immediately notifying the troops of the pending threat; the organization of dependable security and defense of rear installations which the enemy intends to capture; the early establishing of highly mobile antiassault reserves and the maintaining of them in constant readiness for action; the preparation of artillery fire and air strikes against the possible landing areas and the building of all sorts of obstacles and obstructions; careful coordination of the actions of all forces and certain others. Certainly this experience must be applied creatively, considering the altered conditions and avoiding routine.

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Ideological Conflict over Questions of History of Foreign Intervention, Civil War in USSR
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[Article, published under the heading "Against Bourgeois Falsifiers of History," by Col A.S. Yakushevskiy, candidate of historical sciences: "The Ideological Conflict over Questions of the History of the Foreign Intervention and Civil War in the USSR"]

[Text] Some 70 years have passed since the first military attack by the forces of international imperialism on the Soviet Republic.(1) Marxist historical science has persuasively disclosed the causes and nature of this war, it has unmasked the guilty parties and has shown the inevitability of the victory of the young Soviet nation over the combined forces of the foreign interventionists and domestic counterrevolution. However, bourgeois historians, sociologists and military writers have endeavored to justify the anti-Soviet military intervention and its organizers, to dispute the inevitability of the victory of the young socialist state over its numerous enemies, to

distort the nature and sense of the major class struggle for the new social order's right to exist and to defame the role of the Communist Party in the defeat of the interventionists and White Guards.

A profound scientific analysis made by Marxist historians of the causes of the Civil War in the USSR shows that the guilty parties were the Russian bourgeoisie and landowners, the exploiting classes together with the supporters of the concessionist parties inspired and supported by international imperialism.

Bourgeois military historiography takes a different approach to the treatment of this problem. Class hate for the worker and peasant state and anticommunist aspirations have forced it to distort the truth and do not permit it an opportunity to draw conclusions corresponding to objective reality, the lessons of history. Typical of this is the version of the professor from the University of California in the United States, Peter Kenez. According to him, the Civil War in Soviet Russia was caused by the revolution and the interference of the imperialist states into the affairs of the Soviet Republic and the intervention organized by them in Russia were not of substantial importance. Kenez has defended this version in his two books with the same title "Civil War in South Russia." In the Civil War, this overseas professor views only the rivalry of two internal Russian antagonistic groupings, each of which, as he writes, "endeavored to impose its will on the people who resisted this." (2)

Kenez explains the victory of the Bolsheviks in the fight against the foreign interventionists and domestic counterrevolution primarily by the fact that the Reds were "the masters of political manipulation" and were good propagandists and administrators. The Whites among whom there was a predominance of officers, in his words, "in the past had prepared nothing to create an effectively working administration on the territory controlled by them, to skillfully set out their goals or win over to their side the various strata of the Russian people who little understood the events." The leaders of the Whites, the same author writes, were professional military men, they knew only their job well, they "were disdainful of politics and for this reason, never correctly understood the political content of the war they were waging." (3)

Such a primitive interpretation of the reasons for the defeat of the White Guards and interventionists in the years of the Civil War was needed by Peter Kenez in order to cast doubt on the voluntary support by a predominant majority of the Russian people for Bolshevik policy or the conformity of this policy to the fundamental interests of the Russian workers. According to the Kenez version, the Russian people could have perceived and shared the goals which the White Guards were defending in the war if they had presented these ideas to the people with greater skill than did the Bolsheviks. (4)

A similar viewpoint on the causes of the Civil War in Soviet Russia is supported by the professor at the University of Toronto in Canada, John Keep, in his book "The Russian Revolution." He asserts that the Russian workers did not voluntarily follow Lenin's party but were supposedly deceived by it and then, having recognized their position, began to fight for liberation from the "authoritarianism" of the Bolsheviks and this was the reason for the outbreak of the Civil War.(5)

These assertions completely contradict the truth. The Civil War was waged not between the Russian workers and the Bolsheviks but between the workers who followed the Bolsheviks and the former ruling classes who, with support from international imperialism, were endeavoring to regain their former rule destroyed by the October Revolution. V.I. Lenin emphasized that the Civil War was caused "by the rabid resistance of the property-owning classes who realized perfectly well that they were confronted with the last and crucial battle for the preservation of private ownership of the land and the means of production...."(6)

Contrary to historical fact, the reactionary bourgeois historians have continued to lay the blame for the outbreak of the Civil War and foreign intervention in Russia on the Bolsheviks. By so doing, they endeavor first of all to intimidate the working masses in the capitalist countries by the inevitability of a civil war and the related hardships as obligatory accomplices of the socialist revolution and to instill in them the notion of the necessary acceptance of the existing exploiting system.

Bourgeois historians who have written about the Civil War in the USSR voice all sorts of sympathy for the White Guards and for all who fought against Soviet power and depict them as supporters of "legitimacy" and defenders of "democracy" who supposedly were fighting to save the victories of the February Revolution. The American professor G. Brinkley, for example, writes that Denikin had proposed a program aimed at liberating the Russian people from suppression and exploitation. In the words of the Canadian military historian, J. Swettenham, Kolchak brought the people of Siberia "all possible benefits."(7) Western propaganda has popularized the leaders of the Russian counterrevolution. An example of this was the publishing in the United States of Denikin's memoirs "The Career of a Tsarist General" by the University of Minnesota Press in 1975.(8)

In extolling the White Guard generals, modern bourgeois historians carefully overlook the fact that for the proletariat and the working peasantry of Soviet Russia, the Civil War was a just war for preserving the victories of the Socialist Revolution which had abolished the power of the bourgeoisie and the landowners. They pass over in silence the policy of restoring the old bourgeois-landowner orders hated by the people as this was carried out by the White generals on occupied territory. In the works of a predominant majority of the bourgeois historians,

there is not even mention of the fact that the policy of the White Guards aroused numerous actions by the workers and in a number of areas these developed into outright peasant revolts in the rear of the White troops. Ultimately this led to even greater solidarity of the masses of people with the Bolsheviks and to the gradual going over of the hesitating peasant strata to the side of Soviet power.

The Russian workers and peasants followed the Bolsheviks and under their leadership fought against the enemies of Soviet power. Even one of the leaders of the counterrevolution, the leader of the Cadet Party, P.N. Milyukov, was forced to admit that "Soviet power was much stronger and much more popular than was thought."(9)

Many bourgeois historians have endeavored to justify the military intervention by imperialism into the internal affairs of Soviet Russia in 1918-1920 or to play down the scale of this intervention and conceal the true goals of the foreign military intervention. Contrary to the facts, certain of them have endeavored and do endeavor to present the foreign intervention as an "action of aid" to the people of Russia and as a certain "liberation mission." The U.S. military intervention into Soviet Russia, commented the American journal *Defense and Foreign Affairs*, was a "humane act" by President Wilson who supposedly wanted to help the Czechoslovak prisoners of war in Siberia.(10) In the book "The Allies and the Russian Collapse," the English historian M. Kettle states that the states of the Entente "desired the victories" of the revolution in Russia, they "sympathized" with its people, they did not have any "aggressive intentions" and by sending their troops into Russia helped it "save the fruits of the revolution" from "German penetration."(11) To confirm this absurd thesis, the author refers to the statement by the English foreign secretary in the House of Commons on 14 March 1918. But this statement was made with one aim, that is, to prevent the signing of the Brest Peace and prevent the consolidation of the victories of the Socialist Revolution in Russia. Kettle could not help but know about the goal of this statement but has intentionally made no mention of it in his book.

In endeavoring to justify the exporting of counterrevolution carried out by the imperialist states into Soviet Russia, the West German historians B. Mann, W. Baumgart and others have written that the Kaiser's troops in occupying the territory of the Soviet Baltic in 1918 pursued "liberation goals" and "provided help to the local population there."(12) At the same time, the help which was provided to the workers of the Baltic states by Soviet Russia in the fight against the local bourgeoisie and interventionists after the abrogating of the Brest Peace has been depicted by bourgeois historians as "Soviet intervention" and as "an attack" on these states. This, for example, is what was done by the well-known West German historian Georg Rauch. One of the sections in his work "Bolshevik State Formations in the

Baltic and Soviet Policy" has been titled by him "The Soviet Attack at the End of 1918." (13) Rauch writes that on 13 November 1918, the Soviet government, taking advantage of the November Revolution in Germany, abrogated the Brest Peace and immediately gave orders to the Red Army units "to seize Estonia and Latvia as quickly as possible." According to his assertion, "the capture of the Baltic states was one of the points in the overall plan of carrying out the world revolution," that is, by the force of arms to spread Bolshevism into Germany, Austro-Hungary and other countries. (14)

In the book by Georg Rauch there is not even a word that the Estonian and Latvian workers themselves restored Soviet power. He writes nothing of the fact that the German occupiers in the Baltic were replaced by English and other interventionists supported by the Estonian and Latvian bourgeoisie. But at the same time this author points out that "the Estonian population viewed the Bolshevik troops as a foreign army of occupation," although there were Estonian units in them. He also writes of the repeated clashes which supposedly occurred between the Estonian population and the troops. (15) All these assertions are needed by Rauch to represent the Red Army as a force which was imposed on the population of the Baltic states by the Soviet system and was not desired by it.

Georg Rauch is not alone in his fabrications. Like him are the American authors T. Wallbank and A. Schrier in the history textbook written by them for American schoolchildren under the title "The Twentieth Century World." These authors present as the aggressors not the Western imperialist powers which in 1918-1919 sent their troops into Russia to suppress worker and peasant power but rather the Soviet Republic which supposedly by every means was endeavoring "to cause a revolution in other countries." The Western governments, in their assertion, "were not ready to wage an aggressive war against the Soviet Union" and did not wage it. (16) It is not surprising, hence, that during a survey conducted by the newspaper *The New York Times* in September 1985, on the eve of the Geneva meeting of the General Secretary of the CPSU Central Committee, M.S. Gorbachev, and the U.S. President, R. Reagan, 86 percent of the Americans, as it turned out, did not know that "in 1918, the United States had sent troops into Northern and Eastern Russia along with the English, French and Japanese in support of the anti-Bolshevik forces in the Civil War which commenced after the 1917 Revolution." (17)

As arguments which could justify military intervention by the Entente countries into the internal affairs of the Soviet Republic, bourgeois historians have often raised the refusal of the Soviet government to recognize Russia's debts to the Entente, "the aggressive aspirations of the Bolsheviks" toward neighboring states, their reticence to reach "acceptable agreements with the Western powers" and so forth. Such arguments have been raised, for example, in the works of such bourgeois authors as S. White, R. Jackson, C. Dobson and J. Miller. (18) The

American professor D. Woodward places the blame for the anti-Soviet intervention on the "intractability of the Bolsheviks." According to his version, the English government wanted to come to terms with the Bolsheviks peacefully but they opposed this. (19) Another American historian R. Goldhurst, the author of the book "The Midnight War: American Intervention in Russia, 1918-1920," has endeavored to justify the American government of W. Wilson on the grounds that the president was supposedly "under constant pressure from England and France who were guided by their own interests." (20)

Thus, it has turned out that U.S. involvement in the anti-Soviet intervention was accidental and not a natural act of the American government, an act which at present is supposedly being used by the communists to undermine U.S. authority as a peace-loving state. "From the moment that the Allies for the first time raised the idea of intervention in Russia," writes Goldhurst, "President Wilson realized that this represented an exceptionally dangerous undertaking. But England and France insisted on its necessity." (21)

The American historian has also written that many U.S. political and military figures advised W. Wilson "not to intervene in the affairs of Russia." Initially, the book states, the president was against the plan of sending American and Japanese troops via the Far East into Soviet Russia. However, the situation, Goldhurst writes, "forced him to change his opinion." Wilson was supposedly afraid that Japan alone, without the United States, would begin intervention in the Soviet Far East, become established there and as a result American interests would suffer. French representatives supposedly proved to Wilson the importance of "restoring the Eastern Front" for victory over Germany. In June, in the opinion of R. Goldhurst, in line with the revolt of the Czechoslovak Corps, Wilson agreed to send U.S. troops into Siberia along with the English, French and Italian and issued orders to the Chief of Staff of the U.S. Army, Gen. P. March, to prepare such troops. But the intervention, in the words of the author, did not pursue anti-Soviet aims. "Wilson wanted to use the intervention as a lever for pressuring the Allies at the peace talks table" is how the American historian explains the goals of the intervention. (22)

As we can see, bourgeois historiography, in recognizing the fact of the sending of armed forces from the United States, England, Japan and other imperialist states into Soviet Russia, at the same time endeavors to camouflage the class, predatory goals of this action. For justifying the aggressive intentions of the Entente states, Western propaganda has advanced all sorts of versions starting from assertions on the need to "restore the Eastern Front" and ending with references to the "intractability of the Bolsheviks" who had come to power in Russia.

However, historical facts completely unmask the anti-Soviet plans of the imperialists and show that the interventionist troops were sent to Russia for destroying

worker-peasant power and capturing foreign territory. Let us quote one of the little known documents kept in the U.S. National Archives. This is a memorandum under the title "Allied Intervention in Siberia, Its Importance from the Military Viewpoint" compiled by the English general H. Studd and on 25 March 1918, discussed at a session of the Committee of the Military Representatives of the Entente Supreme War Council. The memorandum mentions the inadvisability of moving the 42,000-strong Czechoslovak Corps from Russia to the Western Front and proposes using the corps initially to "seize Siberia" and then to send the Czechoslovak troops from the Omsk area to Perm and Arkhangelsk. On 8 April, the Committee of the Military Representatives approved the memorandum of Gen Studd and emphasized that the Czechoslovak Corps would become a component part of the future Entente armed forces in Siberia.(23)

The plans for the intervention of troops from the Entente bloc in Siberia were approved at the 7th Session of the Entente Supreme Council on 2 July 1918. The council's decision pointed out that the Allies "should occupy not only Murmansk and Arkhangelsk as a northern staging area from which there could be a rapid advance to the center of Russia, but they should also without any delay establish their control over Siberia, up to the Urals...."(24) For the operations in Siberia there were plans to allocate significant armed forces and organize an unified command over them. The interventionist troops in Siberia, according to the plans of the Entente leaders, should "maintain an Allied nature by incorporating American and Allied troop units." But "the basic mass of troops," as it was felt, "would be made up of Japanese."(25)

The true intentions of the interventionists can be judged from the plan proposed by the English War Secretary W. Churchill at the Paris Peace Conference in February 1919. For achieving unified leadership over the anti-Soviet intervention, he considered it essential to establish a Special Council for Russian Affairs the basic goal of which would be "studying the situation and assessing the forces available to the Allies or required to wage war against the Bolsheviks" and the elaboration of a plan "for actions against the Bolsheviks."(26)

Many bourgeois historians have written that the interventionist troops sent to Russia in 1918-1920 by the governments of the United States, England and other imperialist states were supposedly not employed for the violent overthrow of Soviet power and did not participate in armed combat, but represented a "stabilizing factor" in the "chaos" which had broken out in Russia. Thus, in the book "Quartered in Hell: The Story of the American North Russia Expeditionary Force 1918-1919" prepared by D. Gordon and published in the United States in 1982, it is asserted that the U.S. troops sent into Arkhangelsk in September 1918 only stood provost marshal service "in protecting the port and their own positions."(27) The professor at the University of

Pennsylvania (United States) R. Maddox in his book "The Unknown War with Russia: Wilson's Siberian Intervention" has endeavored to show that American troops headed by Gen Graves and sent by President Wilson in 1918 to the Soviet Far East and Siberia maintained a neutrality and did not participate in the fighting against the Bolsheviks.(28)

In actuality everything was quite different. Even in August 1918, just 10 days after arrival in Vladivostok, the 27th American Infantry Regiment entered battle against the Soviet troops at Krayevskiy siding on the Ussuri Front and then together with the Japanese troops, participated in the offensive against Khabarovsk. Somewhat later, two American companies supported the Japanese offensive against Blagoveshchensk. And here they fought not the Austro-German prisoners, as was stated in the U.S. government declaration, but rather Soviet troops defending the freedom and independence of the motherland.

From October 1918 until the spring of 1920, American interventionist troops in the Far East and Siberia took an active part in fighting against the Bolshevik partisan movement and carried out punitive expeditions against peaceful Soviet citizens. The American general Eichelberger, who in 1918-1920 served on the staff of Gen Graves in the rank of major, subsequently admitted that the units of the U.S. Expeditionary Corps in Siberia "conducted true battles against the partisans." For participation in this fighting, the U.S. government awarded a decoration for Maj Eichelberger.(29)

The American and English troops sent to the north of Soviet Russia fought the Red Army units over the entire period that they remained on Soviet territory. This was a real war against the Soviet Republic.

The interventionists not only participated in combat but also committed numerous crimes against the peaceful population on the Soviet territory occupied by them. Just in the north of our country, the interventionists together with the White Guards wounded and maimed around 30,000 persons, over 112,000 were killed, and a mass of other offenses were committed against the peaceful inhabitants. Over 17 percent of the population of the occupied areas of the north were thrown into prison, concentration camps and torture chambers. During a year, 38,000 arrested persons passed through the provincial prison in the Northern Oblast alone and of this number, 8,000 were executed and over 1,000 died from sickness and beatings.(30)

Certain bourgeois historians, including R. Goldhurst and others, see nothing criminal in the fact that the interventionist troops fought against the Red Army. They merely regret that the anti-Soviet intervention ended in a defeat and did not lead to the fall of Soviet power. Moreover, bourgeois historians have endeavored to draw a conclusion from past experience for the future, they have provided formulas for the ruling circles of the

imperialist states, including what forms and methods must be used in fighting against the Soviet socialist state in order to ensure victory for the imperialists both along the path of "peaceful expansion" as well as in a "hot war."

Goldhurst sees the main reason for the failure of the anti-Soviet intervention in 1918-1920 in the fact that "the Allies could not reconcile their national interests in the fight against Bolshevism": Japan wanted to seize the Soviet Maritime Province, France wanted to get back the money it had invested in Russian industry, England was seeking trade concessions and so forth.(31) In the future, he states, the Allies must reconcile their political goals ahead of time and only then undertake intervention which he considers completely justified under present-day conditions for achieving the important goals for imperialism.

While this American historian is in favor of the preliminary reconciliation of the political goals by the imperialist powers vis-a-vis the Soviet Union, the American military specialists W. Kennedy and M. de Gurki propose using the combat experience gained by the Entente interventionist troops in 1918-1920 under the conditions of the North and Siberia for working out a new military campaign against the USSR.(32)

The ideological conflict being waged presently over the problems of the anti-Soviet intervention and Civil War in the USSR is one of the areas of the clash between socialism and capitalism. Distortion of the military history of the Soviet Union is being widely employed by bourgeois propagandists for the influencing of public opinion in a spirit of anticommunism and anti-Sovietism and for the ideological preparation of new wars against the USSR and other socialist countries.

Footnotes

1. On 6 March 1918, a marine company disembarked from the English cruiser "Glory" in Murmansk. This was the first troop unit of Entente troops entering Soviet territory as interventionists. On 15 March, in London at a conference of the prime ministers and ministers of foreign affairs of the Entente countries, a decision was adopted on "Allied intervention in Eastern Russia." On 5 April, a Japanese landing force and English marines appeared in Vladivostok, and later American troops as well. At the end of November, Entente troops had invaded the south of the Ukraine, the Crimea and Novorossiysk. Outright, large-scale military intervention had commenced by the imperialists of the Entente, Japan and the United States against the Soviet nation. The total number of interventionist troops in Soviet territory by February 1919 was over 167,000 men ("Voyenno-blokovaya politika imperializma: Istoriya i sovremennost'" [Military Bloc Policy of Imperialism: History and Present State], Moscow, Voenizdat, 1980, pp 65-66).
2. P. Kenez, "Civil War in South Russia: 1919-1920," Berkeley, 1977, p XII.
3. Ibid., pp XIV, 312.
4. Ibid., pp 310-315.
5. J. Keep, "The Russian Revolution: A Study in Mass Mobilization," London, 1976, pp VII-X.
6. V.I. Lenin, PSS [Complete Collected Works], Vol 35, pp 243-244.
7. G. Brinkley, "The Volunteer Army and Allied Intervention in South Russia: 1917-1921," Notre Dame, 1966, p 287; J. Swettenham, "Allied Intervention in Russia and the Part Played by Canada," London, 1967, pp 241-243.
8. *Military Affairs*, December 1977, p 205.
9. D.I. Maysner, "Mirazhi i deystvitelnost. Zapiski emigranta" [Mirages and Reality. Notes of the Emigrant], Moscow, Izd-vo APN, 1966, p 162.
10. *Defense and Foreign Affairs*, November 1986, p 45.
11. M. Kettle, "The Allies and the Russian Collapse: March 1917-March 1918," London, 1981, pp 267-269.
12. B. Mann, "Die baltischen Lander in der deutschen Kriegsziel-Publizistik: 1917-1918," Tubingen, 1965, p 183.
13. G. Rauch, "Zarenreich und Sowjetstaat im Spiegel der Geschichte," Frankfurt a/Main, 1980, p 186.
14. Ibid., pp 186-189.
15. Ibid., p 191.
16. T. Wallbank, A. Schrier, "Twentieth Century World," Glanview, 1974, p 134.
17. *The New York Times Magazine*, November 10, 1985, p 48.
18. S. White, "Britain and the Bolshevik Revolution," London, 1979, pp 150-180; R. Jackson, "At War with the Bolsheviks," London, 1972, pp 28-30; C. Dobson, J. Miller, "The Day They Almost Bombed Moscow: The Allied War in Russia 1918-1920," New York, 1986, pp 180-190.
19. *Military Affairs*, December 1977, pp 171-183.
20. R. Goldhurst, "The Midnight War: American Intervention in Russia, 1918-1920," New York, 1978, pp 13-15.
21. Ibid., p 13.

22. Ibid., pp 18-19.

23. U.S. National Archives, Supreme War Council Records. "Memorandum of Gen H.W. Studd," "A" Branch, British Section.

24. "Iz istorii grazhdanskoy voyny v SSSR: Sb. dokumentov i materialov" [From the History of the Civil War in the USSR: A Collection of Documents and Materials], Moscow, Sovetskaya Rossiya, Vol 1, 1960, p 31.

25. Ibid., p 32.

26. B.Ye. Shteyn, "'Russkiy vopros' na Parizhskoy mirnoy konferentsii: 1919-1920 gg." [The "Russian Question" and the Paris Peace Conference: 1919-1920], Moscow, Goskomizdat, 1949, p 117.

27. D. Gordon, "Quartered in Hell: The Story of the American North Russia Expeditionary Force 1918-1919," Missoula, 1982, p 9.

28. R. Maddox, "The Unknown War with Russia: Wilson's Siberian Intervention," San Rafael, 1977, p 136.

29. *Military Review*, March 1968, pp 17-18.

30. "Istoriya SSSR. Epokha sotsializma (1917-1957 gg.)" [USSR History. The Socialist Period (1917-1957)], Moscow, Gospolitizdat, 1957, pp 148-149; M. Bukhanov "Tsivilizovannyye razboyniki" [Civilized Robbers], Vologda, Obl. Izd-vo, 1951, p 14.

31. R. Goldhurst, "The Midnight War," p 270.

32. *National Defense*, July/August 1983, pp 39, 53-54.

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Development of Theory of Combat Employment of Air Defense Weapons (1917-1941)

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[Article, published under the heading "Scientific Papers and Information," by Maj Gen (Ret) A.S. Sherstyuk, professor: "The Development of the Theory of Combat Employment of Air Defense Weapons (1917-1941)"; the term "air defense" was established in 1928 in the Regulation Governing USSR Air Defense but for convenience of exposition is used throughout the article]

[Text] With the start of the employment of aircraft (airplanes and dirigibles) for military purposes the scientists of many countries were confronted with the search for the ways to combat them. In Russia, for example, a solution involved leading specialists from various areas of science. Thus, the military scientists

V.F. Nadenov and S.A. Beknev and the pilots Ye.N. Kruten and P.N. Nesterov developed methods of air operations in covering troops and installations against air strikes as well as for preventing flights by reconnaissance aircraft.(1) The well-known artillery man V.M. Trofimov and the engineer from the Putilov Plant F.F. Lender investigated the possibility of hitting air targets using ground weapons.(2) The results of the testing carried out by them showed the unsuitability of firing at aircraft using then-extant field guns, including the modernized, and the necessity of the immediate development of special anti-aircraft guns. This task was successfully carried out by a group of designers headed by F.F. Lender. The prototypes of the first Russian anti-aircraft artillery (ZA) appeared at the beginning of February 1915, that is, in the course of World War I.

The original design of the Russian 76-mm anti-aircraft cannon (a semiautomatic breech mechanism, independence of the line of sight from the angle of sight, and the presence of a mechanism for automatically feeding corrections into the elevation) gave the latter an advantage over foreign analogues. The gun was successfully employed in combating German aviation and from it it is possible to judge the qualitative changes in the development of air defense weapons in the Russian Army. Its developer, F.F. Lender, along with practical activities, from 1913, was successfully engaged with the questions of the theory of anti-aircraft fire. The result of this intense work was the fundamental "Teoreticheskiy kurs strelby po vozdushnomu flotu" [Theoretical Course in Firing at the Air Fleet] presented by him in manuscript to the Artillery Committee of the Main Artillery Directorate of the Red Army at the end of 1918 and marking the beginning to the development of the principles of the combat employment of anti-aircraft artillery.(3)

During the Soviet period a significant contribution to the development and improvement of the models of anti-aircraft guns and firing control devices, to solving the problems of the employment of anti-aircraft searchlights, sound locators and barrage balloons was made by scientists from the RKKA [Worker-Peasant Red Army] Artillery Academy (from 1925, the RKKA Military Technical Academy; from 1926, it has borne the name of F.E. Dzerzhinskiy) such as: Doctors of Technical Sciences, Professors, Maj Gens Art P.A. Gelvikh and M.F. Vasilyev, Brigade Engineer V.A. Alekseyev, Military Engineer 1st Rank N.I. Pchel'nikov and others. The elaboration of a theory for the combat employment of anti-aircraft artillery was the concern of instructors on the Courses for the Advanced Training of Commander Personnel (KUKS ZA) set up in Sevastopol in 1924 as well as co-workers from the Firearms-Tactical Committee (STK ZA). They carefully assembled, generalized and thoroughly analyzed information on the air defense of troops and installations found in Soviet and foreign literature, they worked out various works, textbooks, teaching aids and field manuals for the anti-aircraft artillery, orders and instructions on air defense and wrote articles and the corresponding sections of general troop manuals.

The largest contribution to this work was made by the teachers of the KUKS ZA N.A. Borodachev, N.S. Vinogradov and M.N. Nikitin. The first of these wrote a series of major works among which are: "Zashchita tyla" [Defense of the Rear] (1924), a draft of the "Temporary Regulation on Air and Chemical Defense for Rear Population Points, Lines of Communications, Factories and Plants" (1925), "Vozdushnaya oborona" [Air Defense] (1926) and "Sluzhba razvedyvaniya zenitnoy artillerii" [The Antiaircraft Artillery Reconnaissance Service] (1926). Of particular value was the later research by N.A. Borodachev "Taktika vozdushnoy oborony" [Air Defense Tactics] (1929) and which in the 1930s was fundamental on the questions of the combat employment of ground air defenses and fighter aviation for covering troops and installations against air strikes and preventing the flights of reconnaissance aircraft. In it the scientist posed and successfully resolved a series of problems relating to the period of the birth of national air defenses, when in our nation and abroad diametrically opposing opinions were voiced on the place of the air forces and air defense in a future war.

The author of the work for the first time in Soviet military science endeavored to analyze thoroughly the nature of the actions of then-existing air attack weapons in the armies of various states and to determine their role and further prospects as well as the essence, goals, tasks and structure of the air defense system. Having formulated the concept of "air defense" as an aggregate of many measures and means designed to combat the enemy military air fleet and for defense against its actions, N.A. Borodachev divided the latter into: active (fighter aviation, antiaircraft artillery and antiaircraft machine guns); passive (camouflage, fortifications, air obstacles and so forth); auxiliary (searchlights, sound locators, the air observation, warning and signal service and so forth).(4)

The scientist disclosed the basic content and work methods of the combined-arms commanders and their staffs, the air defense chiefs, the commanders of the antiaircraft and fighter air units in organizing and providing air defense. He worked out recommendations on the combat employment of existing air defenses and set out the principles for their cooperation between themselves and with the covered forces. The work, in particular, examined the advisable methods of fighter air operations in carrying out air defense tasks and pointed out under what conditions sufficient effectiveness is provided for ground alert (scrambling upon alert) and air alert (patrolling, ambushes and defensive patrols). It showed the necessity of winning air supremacy (for a certain time or in a given area) in the interests of troops defense.(5)

In analyzing the actions of antiaircraft artillery and machine guns, considering the development prospects of air attack weapons, N.A. Borodachev concluded that for successfully combating the latter there must be concentrated fire which could be achieved by the corresponding fire units. Such would be an antiaircraft battery of four

guns for the medium-caliber artillery (SZA) or from two guns for the small-caliber artillery (MZA) as well as an antiaircraft machine gun platoon consisting of two, three or more machine guns.(6) The carrying out independent tactical tasks should be entrusted to tactical units such as: the antiaircraft battalion (three or four batteries) and the antiaircraft machine gun company or group (several platoons).(7)

In the aims of dependably covering the troops against air strikes and interdicting reconnaissance flights, it was proposed that there should be: in a battalion an antiaircraft machine gun group (company); in a division a MZA battalion; in a corps a SZA battalion, a central post and five or six special posts of the air observation service; in an army, three or four SZA battalions and a MZA battalion, one or two antiaircraft companies, two or three antiaircraft searchlight companies, an air camouflage company, a central post and six-eight special posts of the air observation service.(8) Subsequently, N.A. Borodachev set out in detail the principles for the air defense of large installations (areas) in the nation. He examined the tasks carried out here by all the air defense weapons (by fighter aviation, small- and medium-caliber antiaircraft artillery, antiaircraft machine guns, barrage balloons, antiaircraft searchlights and sound locators) and pointed to the necessity of having the civilian bodies carry out a range of special protective measures.

As is known, the organization and establishment, the principle of organization and parameters of the groupings and battle formations, as proposed by N.A. Borodachev, in 1927 were used as the basis for further improving the air defense system. However, the implementation of the planned changes was carried out extremely slowly. For example, the insufficient output of medium-caliber antiaircraft guns by industry, the virtual complete lack of MZA in the troops until 1940 led to a situation where by the start of the war against Nazi Germany, the antiaircraft artillery was below strength. The comments by the scientist on the inadvisability of subordinating the antiaircraft and other ground air defense weapons to the artillery chiefs of the corps and armies, due to the "too small number of common aspects in the combat of the antiaircraft and ground artillery" were not taken into account, while the proposals on the need to introduce in the latter the position of chiefs of the antiaircraft units (air defense chiefs)(9) were carried out only in 1958 in establishing the air defense troops of the Ground Troops.

Another well known specialist concerned with the theory of the combat employment of air defense weapons was N.S. Vinogradov. In his works "Taktika zenitnoy artillerii" [Antiaircraft Artillery Tactics] (1928), "Taktika zenitnykh pulemetov" [Antiaircraft Machine Gun Tactics] (1928), "Vozdushnyye sily i PVO" [Air Forces and Air Defense] (1937) and "Protivovozdushnaya oborona krupnogo punkta" [Air Defense of a Large Facility] (1941), chief attention was given to the questions of the tactics of air defense units and subunits, to the work methods of the commanders and staffs in organizing and

carrying out a troop cover. He was also concerned with investigating the problems of increasing the survival of the air defense system. In this context, he recommended the following: the assigning of roaming antiaircraft guns and subunits; the choice for each battery of several alternate firing positions and the setting up of dummy ones and their periodic change; the coverage of the batteries by antiaircraft machine guns and so forth.(10) In the work "Taktika zenitnoy artillerii," the scientist for the first time in Soviet military literature voiced the idea that battles and operations in the future will have a land-air (volumetric) character and for this reason the decisions of the combined-arms commanders for combat should without fail provide for the defeat of both the ground and air enemy.(11)

The book of N.S. Vinogradov "Protivovozdushnaya oborona krupnogo punkta" at one time was the main theoretical work setting out the principles, forms and methods of organizing and conducting air defense of individual areas and large centers of the nation. It, in particular, pointed out the following: for effective countering of enemy bombers, the battle formation of the medium-caliber antiaircraft artillery, in covering the mentioned facilities, should be formed up considering the providing of a fire effect on the targets for at least 3 or 4 minutes.(12) For this reason, it is no accident that during the period of the Great Patriotic War, SZA groupings having a depth of over 20 km were established around major installations.

Among the valuable works on the theory of the combat employment of air defense weapons are also the books by the group of authors "Artilleriya v osnovnykh vidakh boya (korpus, diviziya, polk)" [Artillery in the Main Types of Combat (Corps, Division and Regiment)] (1940) and of Col M.N. Nikitin "Taktika voyskovoy zenitnoy artillerii" [Tactics of Organic Antiaircraft Artillery] (1942). In the ninth chapter of the first of these, Brig Cmdr M.A. Semenov disclosed the main proposals on the antiaircraft artillery cover of a regiment, division and corps in the main types of combat, on a march and in other states, considering the organization and establishment, the requirements of the field manuals and regulations. The second research was devoted to the questions of the tactics of antiaircraft artillery operations in combined-arms combat and an operation. Over the war years, this became a desk reference for all antiaircraft officers and their faithful assistant in the most difficult situations.

The first works in the area of firing at air targets, starting with the works of F.F. Lender, basically concerned the rules or techniques of firing. Soviet scientists were also concerned with these questions. In 1934, the book was published "Strelba zenitnoy artillerii" [Antiaircraft Artillery Fire] written by the instructor of the KUKS ZA, K.V. Zaremba. This provided a description of the tabular methods of firing medium-caliber antiaircraft artillery as set out in the 1932 Firing Rules, an analysis of these and proposals for improvement. In addition, the

author established the rules for automatic fire using the special antiaircraft artillery fire detector which was still in the development stage. The automatic methods of fire were examined in detail somewhat later by the instructors from the Artillery Academy imeni F.E. Dzerzhinskiy, Majors A.A. Grodzinskiy and M.A. Rerle in "Kratkiy kurs strelby zenitnoy artillerii" [Concise Course of Antiaircraft Artillery Fire] (1939).

One of the first works on the theory of fire was the research of P.A. Gelvikh "K voprosu o strelbe po bystrodvizhushchimsya tselyam" [On the Question of Firing at Rapidly Moving Targets] published in 1928. It not only performed the task of posing the given problem but also proposed a method of assessing the effectiveness of fire by antiaircraft artillery. Subsequently, P.A. Gelvikh continued to work out the questions at air targets in his works "Teoriya veroyatnostey" [Probability Theory] (1933), "Strelba" [Firing], Vol 1 (1934) and "Strelba," Vol 2 (1936).

The student of P.A. Gelvikh, V.A. Alekseyev, also worked fruitfully in this area. In the works "Osnovnyye voprosy teorii strelby zenitnoy artillerii" [Basic Questions in the Theory of Antiaircraft Artillery Fire] (1938), "Raschet summarnogo ellipsoida pri zenitnoy strelbe" [Calculating the Total Ellipsoid in Antiaircraft Fire] (1938), "Teoriya strelby: Kratkiy kurs" [Firing Theory: Concise Course] (1940) as well as in the major work "Teoriya strelby zenitnoy artillerii" [Theory of Antiaircraft Artillery Fire] (1940), he set out the theoretical principles for the methods and rules of antiaircraft artillery fire, he provided a method for calculating the mathematical expectancy and probability of a hit as the most objective criteria in assessing the effectiveness of fire at targets. The theory created by the scientist became a basis for working out the more advanced methods and rules of fire, the antiaircraft fire control equipment and subsequently the rules for firing antiaircraft missile systems.

Thus, due to the unceasing activities of the scientists, Soviet military science by the beginning of the 1940s had achieved substantial advances in investigating the questions of the combat employment of existing and newly received air defense weapons. The theoretical concepts were reflected in the manuals and instructions of the arms of the air defense troops and their combat training was carried out in accord with them. As a result, the organization, weaponry and combat readiness of the Soviet Army air defense formations on the eve of the Great Patriotic War, as a whole, corresponded to the development level of the enemy air attack weapons.

Footnotes

1. See: "Russkaya voyennaya mysl: Konets XIX—nachalo XX v." [Russian Military Thought: End of the 19th—Beginning of the 20th Centuries], Moscow, Nauka, 1982, pp 225-228.

2. See: I.S. Prochko, "Peredovoy kharakter otechestvennoy artilleriyskoy nauki i tekhniki" [The Progressive Nature of Soviet Artillery Science and Equipment], Moscow, Voenizdat, 1952, pp 148-151.

3. See: V.F. Lender, "Trud, ravnny podvigu" [A Work Equal to a Feat], Moscow, Voenizdat, 1982, p 52.

4. See: N.A. Borodachev, "Taktika vozdushnoy oborony" [Air Defense Tactics], Moscow-Leningrad, Gosizdat, 1929, p 9.

5. Ibid., pp 29, 30, 38-50.

6. Ibid., pp 67, 68.

7. Ibid., p 74.

8. Ibid., pp 186, 187.

9. Ibid., pp 184, 185.

10. See: N.S. Vinogradov, "Taktika zenitnoy artillerii" [Antiaircraft Artillery Tactics], Moscow, Voeny Vestnik, 1928, pp 84, 85.

11. Ibid., p 55.

12. N.S. Vinogradov, "Protivovozdushnaya oborona krupnogo punkta" [Air Defense of a Large Facility], Moscow, Voenizdat, 1941, pp 105, 106.

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